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SOUTHERN

MEDICAL REPORTS;

CONSISTING OF

GENERAL AND SPECIAL REPORTS,

ON THE

MEDICAL TOPOGRAPHY, METEOROLOGY, AND PREVALENT DISEASES,

IN THE FOLLOWING STATES:

LOUISIANA,	NORTH CAROLINA,	ARKANSAS,
ALABAMA,	SOUTH CAROLINA,	TENNESSEE,
MISSISSIPPI,	GEORGIA,	TEXAS.
	FLORIDA,	

TO BE PUBLISHED ANNUALLY.

EDITED BY

E. D. FENNER, M. D., OF NEW ORLEANS;

Member of the American Med. Association; Member of the Physico-Med. Soc. of N. O., and of the Louisiana State Med. Soc.; Cor. Mem. of the State Med. Soc. of Mississippi, the Med. Soc. of Montgomery, Ala., the Attakapas Med. Soc., and of the New York Academy of Medicine.

"sicut
Parvula (nam exemplo est) magni formica laboris
Ore trahit quodcunque potest, atque addit acervo,
Quem struit, haud ignara ac non incanta futuri."—*Hor.*

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TO THE

MEDICAL PROFESSION

OF THE

UNITED STATES,

THIS WORK IS RESPECTFULLY INSCRIBED

BY

THEIR CONFRERE,

AND

OBEDIENT SERVANT,

THE EDITOR.

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PREFACE.

In accordance with the plan set forth in our *prospectus*, we now respectfully submit this our first volume to the consideration of the Medical Profession. It will be perceived that we have in some degree come short of our fair promise; but we greatly underrate the liberality of our Profession, if all due allowance be not made for the numerous difficulties necessarily attendant upon the inception of such a work. As with all enterprises, of course this must have a *beginning;* nor could it be expected to "spring forth *perfect*," like "*Minerva* from the brain of *Jove!*" Writing, like every other art, requires much practice to make it respectable; and in behalf of all concerned in the production of this volume, we may state that our highest aim has been to communicate our observations in a plain and intelligible style. If they possess any merit whatever, it must consist alone in their *correctness*, and in this we have endeavored to be as faithful as possible. On account of the heavy expense of publication and the sacrifice of time required to bring out the first volume, we have had to make it less than 500 pages; but if this should meet the approbation of the Profession, the second will, doubtless, be much more.

Indeed, the area of our observations is so extensive, diversified and abundant in resources, that we shall probably find

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it difficult to compress our annual contributions within the compass of a single volume. All will depend, however, upon the favor with which the work is received. It is here begun, and it is for the Medical Profession to say whether it shall be continued.

The authors of *general reports* will please take somewhat comprehensive views of *Topography*—some well marked section for instance, as has been done by Dr. Pendleton, of Georgia.

We invite special attention to the diseases of *Negroes*, and every thing relating to their sanitary condition. Contributions on these subjects are calculated to give great interest to our work.

The *Decennial Census* of the United States, about to be taken, will doubtless afford a great amount of valuable statistics for our next volume. We may also expect much aid from the recently established *Bureau of Statistics of Louisiana*, which is in charge of Professor Debow, the able editor of the *New Orleans Commercial Review*.

To the heads of the Medical Bureaus of the U. S. Army and Navy we return thanks for the kind interest expressed in behalf of our work, and hope they will furnish some valuable reports from the Medical Officers on duty in the South.

INTRODUCTORY ADDRESS.

In the commencement of an enterprize which, if sustained, must have a bearing not only upon one of the most important avocations of civilized man, but upon the general welfare of society, the Editor deems it his duty to set forth candidly the motives which have prompted the undertaking, the principles which are to guide his conduct, and the chief objects he has in view.

In other lands, the smiles of *the favored few* who command the influences of wealth and station are required, to give impetus to the efforts of genius, or bring them into notice; but in this free country, where the mind is unfettered, and real merit the only recognised basis of success, a larger field of enterprize is presented, and there is a disposition to encourage every undertaking that promises to be useful. Thus many of the greatest institutions of our country may be traced to a beginning in individual enterprize.

Our citizens of the older States, and especially the wealthier classes, have often been taunted for a servile imitation of the European Aristocracy; whilst those of the younger States, and in more moderate circumstances, have been equally noted for their manly independence, their originality of thought and their boldness of action. We have a right to profit by the recorded experience of the past, for it is our inheritance, and we should know what has been done by our worthy predecessors, that we may allow them full credit for their labours; but at the same time, we are not bound to admit any chartered road to knowledge, nor to confine ourselves to any beaten track. The world, with all its mysteries, lies before us as it did before our illustrious

predecessors, and as we have been the recipients of great favors from them, so should we labor in our day and generation to transmit something of value to those who are to succeed us on the stage of life.

In respect to medical literature and science, our lot has been cast in a region where they have as yet been but slightly cultivated—a region vast in extent and abounding in the sources of human life and comfort—already inhabited by *millions* of human beings, and capable of maintaining *tens of millions*. But this fair and beautiful section of the globe is not supplied by the hand of Providence with its rich luxuriance of blessings and comforts, unmixed with the sources of suffering and of death.

Here, as every where else, good and evil are remingled in the cup of life; almost every comfort and advantage is accompanied by a corresponding danger, and *man's intelligence*, is his only dependence for safety and happiness.

From the earliest settlement of the Southern States by the white man, their historian has had to note the prevalence of the most destructive diseases. If the thousands who have fallen into untimely graves could rise from the dead and stand before us, how appalling would be the sight! In view of this great destruction of human life, one might readily suppose that the diseases to which man has been exposed in the South had been objects of special attention, and that the profession which is devoted to their study and management had received every possible encouragement and support—moreover, that every physician who had witnessed the sufferings of his fellow-beings, and discovered any better method of relieving them, had not only been richly rewarded for his services, but urged by every noble impulse to transmit his observations to those who were to follow him. But how different are the facts! The governments organized by the people of this region to provide for their welfare and safety, have deemed the preservation of human life either *beneath their notice or beyond their comprehension;* whilst the physicians, left to take care of themselves, and bereft of all the customary stimulants to ambition, have spent their toilsome lives in obscurity, and carried with them to the tomb whatever useful knowledge they may have gathered from the lessons of experience.

A century ago, the South could boast of distinguished physicians, who took the lead in the cultivation of medical

science in America. Virginia had her Clayton, her Mitchell and her Tennent; and South Carolina had her Bull, her Lining, her Chalmers, her Garden and her Moultrie—names almost entirely unknown to the present generation. These were men of science and ability, and left contributions behind them which the South should rescue from oblivion. A long lapse of silent indolence followed their departure, and the South yielded up the noble commencement she had made in the cultivation of medical science in America to the more energetic physicians of the North.

Where shall we look for the records of the deadly pestilences which decimated the inhabited portions of the Southern States half a century ago, or even twenty-five years? With the exception of a few detached essays scattered through the periodicals of our more literary brethren at the North, there is scarcely anything to be found. Seven years ago there was not a medical journal published south of Kentucky, nor was there a medical book emanating from any respectable physician in the South, with the exception of two small works by the late Dr. Huestis, of Alabama. And this is to be said of a region abounding in intelligent physicians, and offering the richest field for medical observation perhaps on the face of the earth! Since 1844 we have had as many as four medical journals in the South at one time, three of which are still sustained with much ability, lacking nothing but a better pecuniary support to insure their continuance. Since that period works on practical medicine have also recently emanated from Professor S. H. Dickson, of South Carolina, and Doctors Fort and M'Gown, of Georgia.

The motive that prompted the present undertaking, which was a desire to stimulate the physicians of the South to a more zealous and energetic prosecution of the noble science to which they have devoted their lives, and its object, to establish a cheap and substantial medium of publication, through which their labors may be united, interchanged among each other, and handed down to posterity.

The work shall be conducted on the most liberal and independent principles. Subservient to no party, nor school, nor local influence, it shall be the impartial organ of the medical profession within the limits we have prescribed, so far as they may think proper to adopt it. We therefore call upon all Southern

physicians whose minds have been liberated from the shackles of ignorance, and who scorn the seductive temptations of imposture—all who are capable of appreciating the beauties and the blessings of science, and who can sympathise with their suffering fellow-beings, to come forward annually, and contribute what they can to the general fund of useful medical knowledge. Ours shall be the task of the industrious little ant so beautifully described by the Roman poet, whose words we have adopted as our motto :—

———"*Sicut*
Parvula (nam exemplo est) magni formica laboris
Ore trahit quodcunque potest, atque addit acervo,
Quem struit, haud ignara ac non incanta futuri."

Let us now take a glance at the labor before us. It is very well known, though not universally admitted, that even ordinary diseases, such as are recognized all over the world, are often very much modified by the different climates and localities in which they appear. It is also known that some diseases are indigenous to certain localities and climates, and that they seldom or never prevail in any other—they have often been transplanted, but could not be propagated. Yellow fever never originates in Ireland, nor typhus in Cuba. These diseases cannot flourish as exotics far removed from their native climes. Many others might be named, but we deem it useless. Now, yellow fever has been known to prevail from one extremity of the United States to the other—from Quebec to Pensacola ; but who does not know where its home is, or that it is seldom seen at the North ? Bilious remittent and intermittent fever, diarrhea and dysentery are recognised all over the Union ; yet how different are these diseases, and the treatment they require, in the various localities in which they prevail. Even in the same locality, endemical diseases are greatly modified by the difference of seasons, and demand corresponding modification of treatment. If this be so, why should we wonder that climates and localities, differing from each other *toto cælo*, should give rise to diseases altogether different, or that they should modify any that are brought within their influence ? These facts are universally observed and ought to be expected.

It surely will not be denied that the immense region of coun-

try which we have marked out as the scope of our observations, differs sufficiently in its prominent features of soil and climate, from the region lying north of it to be justly entitled the *Southern States*, as distinguished from the *Northern*; and it is also true that the various sections of this great Southern region differ very materially from each other in respect to climate, locality and geological formation. In like manner, a general distinction may be drawn between the prevalent diseases of the North and the South, as well as in the different sections of the South. Thus we may not only mark a difference in the general features of diseases in the various regions and sections, but they really call for a corresponding modification of treatment. Whoever expects to see the same remedies, administered in like doses, and in apparently similar conditions of the system, produce equally beneficial effects in these various regions and sections, will find himself egregiously mistaken. He must learn how to adopt his remedies and their doses to the peculiarities stamped upon disease by climate, locality, habit and mode of living, before he can ever become a successful practitioner.

In view of these considerations and many others now omitted, we shall endeavor to establish a *Magazine*, in which shall be recorded the practical observations and experience of all Southern Physicians whose energies are expanded beyond the bounds of self-interest, and whose philanthropy would prompt them to contribute what they can to the relief of suffering humanity.

In our earnest endeavors to arouse the ambition and energies of Southern Physicians, far be from us the desire to see developed any *sectional feeling* beyond the strict proprieties of a laudable competition. We have long been indebted to our brethren of the Northern States and of Europe for their profound researches and indefatigable labors; whilst they have long needed correct and faithful accounts of the ravages of Southern diseases upon the human constitution, and the best methods of preventing them. They have been our preceptors in the elements and the principles of medicine; but we have obtained our knowledge of diseases from *personal observation*. Let us henceforth endeavor to reciprocate, with good feeling and proper courtesy, the obligations annually conferred by our

brethren of the North and of Europe. We have a richer and more varied field for observation than they have, and, with equal industry, would be able to contribute more to the archives of medicine. From indolence and neglect, our Profession has in some degree lost caste in society, and consequently its legitimate domain has been exposed to the incursions of the vilest impostors and the most ignorant pretenders to science; but by proper application and a pure and dignified course of conduct, it may soon be placed in its proper position, which is among the highest, if not *the very highest pursuit of man.* For what can be of greater importance than the study of man from the cradle to the grave—aye, from his conception to his dissolution—all that relates to his origin, nature, personal safety and health, upon which latter depend all his chances of earthly happiness and pleasure! Others may guide his moral conduct and speculate on his destiny beyond the grave, but *his physician alone* can defend him from the casualties and unseen dangers which beset his pathway through life.

The establishment of Medical Journals in the South has given a decided impulse to professional improvement. Physicians read and write more than they did formerly. Indeed, these two processes go very much hand in hand. But few men read a great deal without attempting to write: On the other hand, whenever a man attempts to write, without having a well-stored mind, he so soon sees the necessity of reading, that he is apt to apply himself to it. Many physicians have recently written, and creditably too, who, but for the desire to aid some medical journal, or perhaps the example set by some neighbor, would not have written at all. One writer makes many, and thus one may enjoy the gratification of seeing his effusions call forth a display of talent in others that would otherwise perhaps have remained in obscurity. It is important that a standard of professional merit should be erected *in the ranks of the profession;* for they are the only competent judges, and should direct public opinion. This can only be effected through the press. Moreover, by placing the achievements of accomplished physicians and surgeons more conspicuously before the gaze of the world, you excite laudable ambition and suppress those contemptible meannesses and petty bickerings

which are only fostered in privacy and obscurity, to the disgrace of the Profession.

The editor of these Reports entertains the most friendly regard for all the Medical Journals of the South, and sincerely hopes that his work may not conflict in the slightest degree with their interests or success. He expects to select from them whatever they may contain of importance, without lessening their influence or checking their progress. Having been four years connected with one of them, and thus become familiar with their arduous labours, we can but wish them all manner of success. We return our most grateful acknowledgments to the Editors of the Medical Journals throughout the Union for their kind and flattering notices of our Prospectus, and more especially for the reception of their periodicals in exchange, nearly twelve months before the appearance of our first volume. Who, but liberal and enlightened physicians could be capable of such generosity! If, in the beginning, our work should fall below the expectations of our friends, we shall regret it, but can only renew our promise *to do our best*, and our hope to improve as we progress. We trust that all due allowance will be made for any imperfections that may appear, on account of the great amount of labor that unnecessarily fell upon us at the commencement. And here an apology is due for obtruding so much of our own writing as appears in this volume. It has only been given for want of better. We had promised the work and invited many to contribute, but for fear of disappointment from others, we determined to do all we could ourself. We will most cheerfully give place to better writers, and we know they can easily be found.

We return our sincere thanks to those who have so promptly and so kindly come to our assistance in this trying emergency. Their kindness can never be forgotten, and we doubt not their labours will be duly appreciated.

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REPORTS FROM LOUISIANA.

ARTICLE I.—General report on the medical topography and meteorology of New Orleans, with an account of the prevalent diseases during the year 1849.—by the editor.

I. *Medical Topography.*

The city of New Orleans, in latitude 29° 57′ 30″ N., and longitude 13° 9′ W. of Washington, is situated on what is termed the left bank of the Mississippi river, about 110 miles from its mouth in the course of the stream, and about 90 miles in a direct line. Its boundary in front extends along the river about five miles. In the rear, the corporation extends to lake Pontchartrain, though the habitations at present only reach about three quarters of a mile. The site being far below the annual elevation of the river, and the *back part* below the occasional rising of the lake, the city has to be protected from inundation by means of *levées* or dams—one running its whole length in front, one above extending from near the river to the swamp, and another covering the entire rear. The levée in front is about seven feet in height—above and in the rear it is not required to be so high. Lake Pontchartrain is situated about five miles back of the city, and its level is about seven feet below the base of the front levée. The intermediate space between the lake and the city is a cypress swamp, presenting, about midway, a considerable elevation called the *Metairie Ridge.* This vast swamp has undergone a wonderful amelioration within the last twenty-five or thirty years. The part within two miles of the city has been pretty thoroughly drained, by which means a large extent of valuable land has been reclaimed, and in a few years will be covered with build-

ings and gardens. The surface is gradually becoming more elevated, the streets are annually extended in that direction, and thus the spot, which, a few years ago, was a *pestiferous fen*, will probably soon become the abode of a dense and active population.

There are two canals and a railroad which lead from the city to the lake, which are the channels of an active commerce. Along the bank of each canal are beautiful shell roads, forming the most delightful drives anywhere to be seen. The principal works of the Draining Company are between the two canals, extending from one to the other. There is also an important work below the canals. These works consist of extensive ditches, powerful engines, and very large wheels, which, when set in motion, force the water from the extensive reservoirs into which it is drained, into the bayou St. John, and thence into the lake.

We learn from Paxton's Directory, published in 1822, and the first ever gotten up in New Orleans, that the verge of the river at that time was only sixty feet from Levée street, (we presume old Levee street.) The distance now varies from one to two hundred yards. This immensely valuable ground, presenting now a varied scene of active business perhaps without a parallel on the face of the globe, has been gradually reclaimed from the river, whilst there has been not quite a corresponding loss on the opposite side, caused by the caving of the bank. The levée, to the extent of three or four miles, is lined the greater part of the year with every variety of water craft, from the most magnificent ships and steamboats down to small schooners, oyster boats and flatboats. The principal amount of shipping is located at the lower and upper part of the city—the intermediate space is allotted to steam and flatboats. During the winter and spring, the shipping fastened to the levée is frequently four or five tiers deep.

Since the late inundation, caused by *Sauvè's Crevasse*, the General Council of the city has had a new levée erected, commencing at the new canal on Claiborne street, running up to Felicity road, the dividing line between this and the city of Lafayette, thence towards the river to Apollo Ridge. The object of this levée is to protect the city against the effects of crevasses above. With this safeguard and the proper maintenance of the levées, front and rear, our city may be kept very secure against overflow either from the river or lake. Upon several occasions

the waters of the lake have been driven upon the rear of the city by the continuance of strong east winds, until they reached as far as the former capitol, on Canal street. The last of these occurrences happened in the spring of 1846—the one previous in 1832. Farther on will appear a minute account of the late inundation, from the hands of Professor Forshay, who is fully competent to do justice to the subject.

According to Dr. Barton,* "the geological formation of the soil, on which the city is built, is alluvial—the surface and subsoil, to a great extent, being composed of the deposits of the river. In some places, beds of pure white sand occur at a depth of six to ten feet, showing the former positions occupied by the waters of the gulf. The height of the ground on the river bank is about fourteen feet above the level of ordinary water in the gulf."

We beg leave to differ from Dr. Barton in his remark, that "the river usually commences its rise about the last of November, attains its maximum elevation in March, remaining thus until the latter part of May; then falls more rapidly than it rose, till about the latter part of September, and remains stationary until the autumnal rise." We think it would be more generally correct to say there are two distinct annual risings of the river—the first usually attaining its maximum in March, and proceeding from its tributaries, the Ohio, Tennessee, Cumberland, Yazoo and some others; the second occurring in June, and proceeding from the melting of the snows at the head waters of the Mississippi and Missouri, the Arkansas and the Red river. Either of these sources of high water in the great channel, coming down separately, may pass off without doing much injury; but if there should happen to be a conjunction of the two, as sometimes occurs, the consequences are generally disastrous. All this will probably be more fully set forth by Prof. Forshay, who has kept a record of the rise and fall of the Mississippi for a number of years.

The streets of New Orleans run at right angles, and are generally narrow in the older part of the city. Those more recently laid off were allowed much greater width. These are principally above Canal street, and in the rear. In the populated part of the city, at the present time, there are three streets of extraordinary width; viz., Canal, Esplanade and Rampart. The two former separate the three Municipalities, and the latter intersects them in the rear. These streets are about one hundred feet

* Report to the American Medical Association, vol. ii, 1849.

wide, allowing ample pass way on their sides and handsome promenades in the centres, shaded with trees. There are six public squares, appropriately situated and answering the valuable purposes of recreation and ventilation. We have no recollection of any blind alleys in the city. Situated, as we are, at a convenient distance from the Gulf of Mexico, and under the full influence of its balmy breezes, our city does not suffer in the least from want of proper ventilation. According to Dr. Barton, "the prevailing winds are, during *winter*, E., N., and N. W.; during *spring*, E., S., and S. E.; during *summer*, S. E., E., and S.; during *autumn*, N., E., and N. E. A perfectly calm atmosphere is very rarely noted; resulting, no doubt, from our alternations of land and water, and the rapid current of the Mississippi before so large a surface of the city."

We presume it would be difficult in this day to form any adequate conception of the condition of the streets in the business parts of the city previous to the introduction of pavements. Even now, during long spells of rainy weather, the unpaved streets, in the comparatively unfrequented parts of the city, become impassable. How drays laden with cotton and tobacco, or even carriages with passengers, got along, in former times, we can hardly imagine.

For a long time, the idea of *paving* the streets of New Orleans was viewed as perfectly chimerical; and it was not until the year 1822, after a wealthy and public spirited individual, Mr. Benjamin Morgan, had taken upon himself the trouble and expense of making the experiment on a small scale, that it was seriously entertained by the muncipal authorities. We learn from a torn and imperfect copy of Paxton's old Directory, before mentioned, that so early as the year 1806, a Mr. Rillieux had paved the yard and passages of an extensive *warehouse* (we presume), which stood pretty well and answered a valuable purpose. From this isolated fact, Mr. Morgan drew the practical induction that the whole city might be paved, notwithstanding the great difficulties to be encountered in the nature of the locality and the soil. Yet he found but few or none to agree with him in apparently so chimerical a conception. So fully convinced was he of its practicability, however, that he determined to make the experiment at his own expense. In the year 1818, he had pavement laid down on the portion of Gravier street between Magazine and Tchoupitoulas streets, near the present location of

Banks' Arcade, one of the largest public buildings in the city. The locality was well adapted to a fair experiment, being near the principal landing from the river, and very much used. It may well be imagined with what interest the inhabitants watched the success of this small experiment, so important in its consequences to the future progress and welfare of the city. Year after year rolled by, and there stood the small spot of pavement, like an *oasis in the desert*, sought by every carriage, cart and dray that passed in that direction, for the brief respite it afforded from the surrounding mud. After a test of *four years*, it was admitted by all that the experiment had *fairly and fully succeeded;* and, in 1822, the municipal authorities commenced the great and costly work of paving the city. Paxton says: "This year the general paving of the city was commenced, and already the whole of Chartres street and parts of Conde, St. Peter and St. Ann streets are finished in the most substantial and workman-like manner, with curb-stones and raised side-walks. It is contemplated to progress in the paving annually, and, as an inducement to persons to bring paving stones in their vessels as ballast, from the eastern cities, the following notice was published by the corporation. 'Resolved, That the Mayor of the city of New Orleans be authorized to pay three dollars and fifty cents per ton for good paving stone, from the first of May, 1822, until the first of May, 1823, and to receive the said stones on the decks of the ships having the same on board.' The annual revenue of the corporation is about $130,000, which sum is employed in the necessary expenses and improvements of the city." *

Such was the commencement of *pavement* in this city, in connection with which the names of *Rillieux* and *Morgan* deserve to be immortalized. At this time, about one-half of the inhabited portion of the city is paved, and the work goes on from year to year. The general use of small round stones, which are but illy adapted to our soft and infirm soil, has caused a great annual expenditure for the purpose of repairs. During wet weather, the mud is worked up in great quantity between the stones, requiring to be scraped off frequently; and the heavy loads hauled upon drays, carts and waggons, cause numerous depressions or ruts, which must soon be repaired or they become impassable. A great

* We are informed by the Mayor that the annual revenue of the city, at this time, amounts to near $1,800,000.—Ed.

many hands are constantly employed in scraping the mud from the surface into small piles along the sides of the streets, whence it is expected soon to be removed; but too often it remains till it is washed into the gutters by rain, from which a great part has to be scraped out and piled up again. On account of the great expense of keeping the round stone pavement in repair, the use of square stone is gradually being adopted in the principal thoroughfares. Tchoupitoulas street, which leads from the steamboat landing to the greatest number of cotton presses and tobacco warehouses, is being laid down with square stone at this time. The laying of this species of pavement is considerably more expensive than the round stone, but will, doubtless, be found the most economical in the long run, to say nothing of its great superiority in point of comfort. The streets of New Orleans are proverbially muddy and filthy, owing chiefly to the dampness of the climate and the inefficient means resorted to for cleansing. The dependence for *washing* them, is upon heavy rains, the waterworks hydrants placed at long intervals, and the river when above the level of the city. By means of culverts, the water of the river when high is conducted through the levée into the cross streets, and runs in a rapid stream to the rear of the city, whence it is removed by the Draining Company. It will thus appear that, as yet, we have resorted to nothing but *surface draining;* but Dr. Barton has attempted to show that, notwithstanding the low level of the locality, it is perfectly amenable to effective *underground drainage.* Like the institution of pavement, this idea may appear chimerical to many; but future observation and experiment may confirm its correctness: and if so, it will doubtless have a beneficial effect upon the health of the city. It appears strange that a city like New Orleans, situated immediately on the bank of the greatest river in the world, should suffer in any respect for the want of water; and we venture to predict that, at some future period, the inhabitants will look back with astonishment at our long endurance of the inconveniences and *injuries directly tracable to this cause.* The scrapings of the streets are hauled to the back part of the city, where they are deposited, and effect a valuable purpose in raising the ground. The offal from the houses, contents of privies, &c., are now thrown into the river.

The Water Works Company was chartered in 1833, and commenced supplying the city in 1837. It consists of a reservoir three hundred and twenty feet square, erected upon an artificial mound

twenty-five feet high, situated in the upper part of the city, two squares from the river. The water is thrown from the river into this reservoir by a powerful steam engine, and thence distributed throughout the city by means of iron tubes placed under ground in the middle of the streets. The extent of these tubes at this time is about thirty-seven miles. From these main tubes are issued branches of leaden tube, which convey the water into houses for all domestic purposes. We were informed at the office of the company, that the extent of leaden tube at this time is about *one million feet.* In our special report on *Colic*, the probable influence of these leaden pipes on the water imbibed in the city is briefly examined. The Water Works Company do not afford a supply of water nearly adequate to the purposes of domestic use and washing the streets. Within a few years past, a plan was submitted to the General Council, by which continued streams were to be kept running at all seasons along the cross streets from the river to the swamp; but it was not adopted. Such a measure might exercise a beneficial influence upon the health of the city. At present, the open gutters often present the most disgusting aspect and are exceedingly offensive to the olfactories. There is still a considerable number of vacant lots in the city, many of which are lower than the level of the streets, and, during wet weather, contain stagnant water, which breeds myriads of musquitoes and evolves deleterious effluvia. Stagnant water is also to be found under many houses.

There are six market places in common use—two in the first Municipality and four in the second. The principal markets are, what is called the *Lower market*, situated on the bank of the river immediately below the *Place d'Armes*—the *Poydras market*, on Poydras street, between Barronne and Circus streets—and *St. Mary's market*, on Tchoupitoulas street. These markets, as well as the others, are leased out to the highest bidder from year to year, and are kept in as good order as could be expected. The population around them is quite dense, and the lower stories of the houses devoted chiefly to small stores, shops, &c. There are many fine buildings near by all these markets. The *lower market*, the oldest and largest in the city, is divided into compartments appropriated to the sale of fish, flesh, fowls, vegetables and every thing devoured by our heterogeneous population; and presents one of the most interesting objects of curiosity to be seen by strangers visiting our city. Here are to be found specimens

of almost every nation and tongue, together with every variety of food eaten by man. Many of the resident ladies and gentlemen are in the habit of visiting this market early on Sunday mornings, for the purpose of witnessing its variegated scenes and the "confusion of tongues."

There are three principal *prisons*—one in each municipality. The *Parish prison*, or *Calaboose* as it is commonly called, is situated in the rear of the first municipality, and is a stately and spacious building. The average number of prisoners in this establishment is about two hundred and seventy-five, consisting of both white and colored, bond and free. The slaves are daily taken out in a *chain-gang*, and set to work on the streets, under the direction of a superintendent. The whites and free colored are for the most part criminals awaiting trial, and are kept within doors all the time.

We were informed at the Parish prison, or Calaboose, that *but four deaths* had occurred in this establishment from September 1849 to March 1850. Of these, two died of cholera, one of yellow fever and one of apoplexy. There was one still-born child. There have been but eight or ten cases of cholera here since the outbreak of the epidemic.

Within the same inclosure is the Police jail and first municipality work-house, a rather limited establishment, which usually contains some fifty or sixty culprits and vagrants. The only work done here is picking oakum by the men, and sewing by the women.

Mr. Planchard, the keeper of the Police jail, said he had been familiar with this establishment for ten years past, and that he had never known a case of yellow fever to occur in it. There had been two or three deaths from cholera.

At the second municipality work-house, we were informed by the clerk, that, during the year 1849, there had occurred a few cases of yellow fever and cholera amongst culprits *recently* admitted. There had been but *two deaths* by cholera. As this prison is situated near the Charity hospital, it is customary to send the bad and lingering cases of sickness to that hospital. Culprits committed for six months generally enjoy uninterrupted health after the first few weeks of their confinement. A great deal of syphilis is seen amongst the culprits recently admitted—of course, contracted in the city.

The second Municipality work-house and prison is situated in

the back part of this municipality, and consists of a large lot of ground inclosed by a high brick wall, and surrounded within by a range of low buildings, with a large open yard in the centre. Culprits for minor offences, are sent here by the Recorder, and condemned to hard labor for a period not exceeding twelve months, generally less than six. The slave prisoners are taken out in chain-gang and made to work on the streets, as in the preceding instance. The arrangement consists of an iron shackle locked round one leg, which may be connected with another person by a chain, if necessary ; but most generally, each individual is separate and has the free use of his limbs. The whites within the inclosure are employed at various occupations—such as picking oakum, making mattresses, hats, shoes, blacksmithing and other mechanical work. The number of inmates in this establishment averages about two hundred. The annual commitments amount to about sixteen hundred.

The work-house and prison of the third municipality is conducted on the same plan as that of the second. The average number of inmates is about thirty. So far as we have been able to learn, the diet allowed in all these prisons is plain, but very substantial and wholesome, the labor moderate, the habits of prisoners cleanly and regular, and the comforts as great as could be expected. They rise and go to their work, take their meals and retire to rest, with the most systematic regularity.

There is a remarkable fact connected with the sanatary condition of the prisons and asylums of New Orleans ; it is, that the inmates suffer less from the prevailing diseases, such as yellow fever, cholera and the like, than any other persons in the city.

The prisons are all situated on the outskirts of the city, which we would suppose were the most unhealthy localities ; and the only striking differences between the living of their inmates and the citizens at large, consist in the *regularity and temperance of their habits and their seclusion from the direct rays of the sun.* But more of this anon.

The cemeteries of New Orleans are nine in number, viz., the Catholic or St. Louis, the Protestant, the Cypress Grove, St. Patrick's, Potter's Field, the Jews', the Odd Fellows' Rest, St. Vincent de Paul and the Charity Hospital. The Catholic and Protestant are situated in the back parts of the first and second municipalities, and are now surrounded by residences. The interments in these are entirely in *vaults*, and above ground. The

cheaper vaults are built in the inclosure and are five or six tiers high, one above another.

Six of these cemeteries, viz.: the Cypress Grove, Potter's Field, St. Patrick's, Hebrews', Odd Fellows' Rest, and the Charity Hospital, are situated on the Metairie Ridge, where they are being rapidly filled with the remains of perishing mortality, and forming what may properly be called *the city of the dead.* Here are to be found some beautiful monuments and tombs; but, far the greater number of interments are made under ground. If we are not mistaken, the Cypress Grove was the first established on this ridge, and its massive portal bears the following beautiful inscription:

> "Here to thy bosom mother earth,
> Take back in peace, what thou hast given;
> And, all that is of heavenly birth,
> O God, in peace recall to heaven."

The present Potter's Field is a new establishment; the old one of that name was filled up and abandoned several years since, and has recently been sold out in lots for the purposes of residence and cultivation. In the early days of the city, cemeteries commenced immediately in the rear of the cathedral, near the Place d'Armes; but, as the population increased, buildings were gradually extended over them, and now they are situated far in the rear. Even here, they are encroached on by progressive improvements, and, before many years, the *dead* will have to give place to the *living*. The Protestant cemetery, near the new basin, is already surrounded by houses, and, in a few years, must share the same fate as the preceding. This cemetery was completely inundated during the late overflow, and not unfrequently emits an offensive odor. We are not aware that the inhabitants residing in the vicinity of the two last mentioned cemeteries are particularly unhealthy.

The privies of New Orleans are necessarily very shallow—extending only about four feet into the ground. According to municipal ordinance, at a late hour of the night their contents are removed and emptied into the river, instead of being deposited in the rear of the city, as formerly.

The greater part of the city is now lighted by *gas*, the works for the preparation of which are situated in the back part of the city, between Gravier and Perdido streets. Their pipes now extend over a distance of more than thirty-four miles.

The city of Lafayette lies immediately above New Orleans —a similar locality, though somewhat higher ground—and contains, at this time, about twelve thousand inhabitants. This city is improving and increasing in population very rapidly. The inhabitants are subject to all the maladies that afflict our citizens.

On the opposite side of the river are three villages, viz.: Algiers, McDonnoughville and Gretna. The first is growing up to some importance, on account of its dry docks and other mechanical apparatus. The others are, as yet, inconsiderable. The inhabitants are subject to all of our diseases.

II. Climate.

The climate of New Orleans is generally admitted to be warm, damp, and relaxing to the energies of the human constitution. During seven months of the year, viz., from the last of April to the first of November, it may justly be termed *summer weather.* The heat is generally most oppressive in June; after that, the nights are generally cool and pleasant, the evening breezes delightful, and every thing quite tolerable, except *the direct rays of the sun*, which none but *negroes* can stand with impunity. The thermometer seldom rises above 90° in the shade, and the mean temperature of the summer is about 80°. The weather of the spring and autumn is generally very pleasant. In the winter it is too variable, and often very disagreeable. The thermometer seldom falls below 32°, and the cold spells are generally very short. The ground is sometimes frozen for a day or two, and we have witnessed sleet upon several occasions.

As we have never kept a meteorological register in this city, we must rely upon those of our friend, Dr. Barton, and the late Mr. Lillie, for the particulars we furnish. We know each of these gentlemen to be perfectly reliable in what they state; but, as they have taken their observations at different hours, and Dr. Barton's are the most extensive of the two, we cannot make a strict comparison between them. Dr. B. alone registers the hygrometer, or *dew point.* He makes *four* observations a day, whilst Mr. Lillie, or his successor, only makes *three.* On this account, we should expect to see a considerable difference in their registers of the thermometer and barometer; but, unfortunately, there is a marked difference on another point, in which they would be expected to nearly agree. We allude to the *rain guage* or *plu-*

viometer. Dr. Barton's observations on the meteorology of this year may be seen in the annual report of the Board of Health, which was drawn up by him. His definition of a *rainy day* is altogether different from what is commonly understood by that term. According to him, "rainy days" are not merely those on which *rain fell,* as distinguished from those on which it *did not fall;* but *the aggregate of rainy hours during a month, expressed in days.* This is more scientifically correct in meteorology; but we think a better general idea of the climate may be obtained by simply noting the number of days on which rain fell, and the quantity.

We must respectfully differ from Dr. Barton in a remark which he makes in his report to the American Medical Association, (1849,) viz., that "*there is no proper rainy season.*" Without consulting meteoroligical registers, our own observation, during the eight years we have lived in New Orleans, has led us to mark the recurrence of a rainy season here, with almost as much regularity as the appearance of frost in winter or the swallow in summer. This season occurs in the months of June and July. Nor are we alone in this observation—it is a common remark, not only amongst the citizens, but also the planters in the country. On conversing with several of them, we found they always look for this rainy season, with its usual concomitants, *mud and grass,* and its still more disagreeable sequence, *intermittent fever.* The difficulty of cultivating a crop during wet weather is well calculated to impress an observation of this kind upon the minds of planters. To see how far this observation would be supported by the register, we have carefully examined the one kept by Mr. Lillie, from which we have abstracted the following statement. We regret not being able to offer a similar one from the register of Dr. Barton, on account of his having been absent from the city four years of the time specified.

The following abstract from a meteorological register, kept by Mr. D. T. Lillie, in this city, will show the average or mean temperature, the number of days on which rain fell, and the quantity of rain, by inches and thousandths, during the different seasons, for a period of ten years, from 1840 to 1850:

1840.	*Mean Temp.*	*Rainy Days.*	*Quantity.*
Spring, ...	74.3	23	11.874
Summer, ...	84.4	32	15.205
Autumn, ...	71.3	22	11.543

Winter, ...	57.2	20	8.429
Ann. mean temp.	71.9	Total, 97	Total, 47.051

No yellow fever this year.

1841.	*Mean Temp.*	*Rainy Days.*	*Quantity.*
Spring, ...	71.4	22	12.887
Summer, . . .	83.9	29	8.787
Autumn, ...	71.4	17	8.592
Winter, ...	56.9	31	18.976
Ann. mean temp.	70.9	Total, 99	Total, 49.242

Severe epidemic (yellow fever) this year.

1842.	*Mean Temp.*	*Rainy Days.*	*Quantity.*
Spring, ...	73.0	21	6.561
Summer, . . .	82.3	36	16.281
Autumn, . . .	70.0	34	11.335
Winter, ...	56.9	22	12.806
Ann. mean temp.	70.5	Total, 113	Total, 46.983

Mild epidemic.

1843.	*Mean Temp.*	*Rainy Days.*	*Quantity.*
Spring, ...	68.5	22	7.584
Summer, ...	82.0	41	22.494
Autumn, ...	73.8	32	11.580
Winter, ...	56.7	22	13.181
Ann. mean temp.	70.2	Total, 97	Total, 54.839

Moderate epidemic.

1844.	*Mean Temp.*	*Rainy Days.*	*Quantity.*
Spring, ...	72.6	21	9.675
Summer, ...	83.7	42	20.791
Autumn, ...	72.2	21	10.014
Winter.	58.3	21	5.959
Ann. mean temp.	71.7	Total, 105	Total, 46.439

Moderate epidemic.

1845.	*Mean Temp.*	*Rainy Days.*	*Quantity.*
Spring, ...	70.3	30	11.643
Summer, ...	82.3	27	9.208
Autumn, ...	67.9	24	15.175
Winter, ...	53.3	23	10.797
Ann. mean temp.	68.4	Total, 104	Total, 46.823

No yellow fever.

1846.	*Mean Temp.*	*Rainy Days.*	*Quantity.*
Spring, ...	75.4	31	31.667
Summer, ...	80.3	47	28.540
Autumn, ...	73.4	19	9.011
Winter, ...	56.2	21	29.456
Ann. mean temp.	71.8	Total, 11	Total, 98,674

Moderate epidemic.

1847.	*Mean Temp.*	*Rainy Days.*	*Quantity.*
Spring, ...	69.8	19	20.049
Summer, ...	87.7	48	39.343
Autumn, ...	70.6	15	10.305
Winter, ...	53.5	23	31.041
Ann. mean temp.	68.6	Total, 105	Total, 100.738

Extensive epidemic.

1848.	*Mean Temp.*	*Rainy Days.*	*Quantity.*
Spring, ...	69.7	20	25.443
Summer, ...	82.3	52	50.189
Autumn, ...	72.2	16	14.100
Winter, ...	59.6	25	37.515
Ann. mean temp.	70.9	Total, 113	Total 127.247

Moderate epidemic.

1849.	*Mean Temp.*	*Rainy Days.*	*Quantity.*
Spring, ...	74.9	21	19.340

Summer, . . .	83.0	58	28.980
Autumn, ...	70.6	24	15.365
Winter, ...	58.6	21	14.498
Annual mean temperature, ...	71.8	Total, 124	Total, 78.283

Mild epidemic.

Let us vary the statistics of these ten years, in search of some other general results. It would appear

That the whole amount of rain was 696.329 inches.

That the annual average of rain was 69.632 "

That the mean annual temperature was 70.6

That the amount of rain at the different seasons was

In the Spring, ... 156.695 inches.
" Summer, ... 239.785 "
" Autumn, ... 117.040 "
" Winter, ... 182.658 "

That the greatest quantity of rain falls in summer and winter;

That the summer was the wettest season during six years, the winter during three, and the spring during *one* year.

All which, it appears to us, would tend to substantiate the remark, that *there are two proper rainy seasons in New Orleans and the surrounding country*, viz., *the summer and winter.* The quantity of rain that falls during each half of the year, as Dr. Barton states, is pretty nearly the same; still the chief amount falls in *summer* and *winter.*

As to the question whether the amount of rain is *increasing* or *diminishing*, with the progress of improvement, it is evident that we have had an extraordinary quantity during *the last four years.*

According to our observation, thunder and lightning are very common here. There has been no very destructive *storm* for the last eight years.

In connection, it may be expected of us to say something in regard to what is termed "*acclimation.*" This term is in very common use, and is well understood to mean, *the habituation of a person to a special climate.*

It is but reasonable to suppose, that man, "the master-piece of his Creator;" and "the inheritor of the earth," was designed to live in every portion of the globe which is supplied by the hand of nature with the means of subsistence, or accessible to com-

merce and the arts. Yet so great is the difference of soil, climate and attendant circumstances, in the various regions between the tropics and the poles, that no race of animals is capable, at once, of enjoying equal health in them all. There is required a certain adaptation of the constitution to each, which can only be attained through the gradual changes effected by time and exposure. Independent of the peculiarities of climate, soil, water, &c., to be found in different regions, it is presumable that there exist in the atmosphere over certain localities, *deleterious gasses, effluvia*, or emanations from the earth, which exert their most powerful effects upon the living system when *first exposed to their influence;* but to which the system may become gradually inured in the process of time. To become accustomed to these peculiarities of soil, climate and noxious effluvia, is what we term being *seasoned* or *acclimated;* and it is wonderful to witness the capabilities of the human system in this respect. There are but few individuals who can make a great change of residence with perfect impunity. With the great majority of people, it is done at the peril of their lives; but the effects are very different upon different constitutions. Some do not become *seasoned* until they have suffered the severest form of endemic fever belonging to the climate and locality; others become gradually and thoroughly acclimated without ever suffering an open or severe attack. There are persons who have resided in New Orleans twenty years without ever having had yellow fever, whilst others have had it two or three times. Strong attacks of the severest forms of our remittent billious and yellow fever seem to cause a *modification of the system*, which secures to the individual a greater or less immunity from subsequent attacks. Attacks of the *milder* forms, as ordinary intermittents, effect no such immunity; but, on the contrary, when frequent, lead to permanent engorgement of the spleen, and cause an increased liability to the complaint. The term *acclimation* is just as familiar to the inhabitants of all the southern portion of the Mississippi valley, as it is to the citizens of New Orleans, and is used to express the same idea, viz., that persons coming from a northern climate and settling there, are very liable to have attacks of fever during the first two or three years, but afterward become quite exempt. This fact is so well known as to cause a considerable difference in the valuation of negroes, and even horses and cattle. An acclimated negro, horse or milch cow, commands a

higher price than an unacclimated one. We shall not, at this time, attempt to explain the nature of the change effected by acclimation, nor the manner in which it is brought about; but it is *a fact* confirmed by long experience and common observation.

Believing, as we do, that *yellow fever* is only *one of the forms or types of endemic, malarious fever*, witnessed almost annually in this city, and less frequently at many other places in the South, we may state the fact, that those who have suffered *severe* attacks of it, or even *mild* attacks, during severe epidemic seasons, certainly remain quite secure from *subsequent attacks;* especially if they continue to dwell in the same locality. But that they are equally as secure as those who have had small-pox, measles or hooping cough, as is maintained by some physicians, we cannot for a moment admit. Our own observation, if we have seen aright, is at variance with this position. It is a common remark among persons who thought themselves acclimated, when attacked by fever again, during a sickly season, to say, that "if they were not *certain of having once had yellow fever*, they would think they had it again." The truth is, *they did have it again;** and if, by neglect or malpractice, the disease had run on to *a dangerous stage or to death*, all doubt would have been removed. But, fortunately, the partial acclimation attained so fortifies the system against the malign influence of the morbific cause, that the tendency to death is not near so strong as in unacclimated subjects; therefore ,most generally, they are easily relieved, and come to the conclusion, *they have not had yellow fever a second time.*

It is a common belief, both in the profession and out of it, that the *creoles* or *natives* of New Orleans, do not have yellow fever at all; but in our accounts of the epidemics of 1847 and '48, we have given the testimony of some of the most respectable physicians to the contrary.†

From the foregoing remarks it follows, then—1. That persons coming from more northern latitudes to this, have to undergo an *acclimation* or *seasoning*, before they become secure in the enjoyment of good health:

2. That this acclimation may be attained without sickness; but that, most generally, it requires the endurance of one or more spells of the customary endemic fevers.

* Dr. Harrison says he had known persons to have yellow fever two or three times, but he never knew such cases to terminate fatally.

† New Orleans Medical and Surgical Journal, 1848 & '49.

3. That an attack of the endemic yellow fever effects greater security against subsequent attacks, than any form of fever seen in the country; but that the remark is applicable, in some degree, to all of them, excepting the ordinary mild intermittents:

4. That persons may have yellow fever more than once, though it is evident that those who have had one plain attack, usually have little or nothing to dread from subsequent attacks:

5. That *creoles*, or natives of New Orleans, may have yellow fever—though generally, they have it in a very mild form.

So much for our present views of acclimation. The subject is full of interest, and we shall probably recur to it, from year to year, as our experience is enlarged.

The sanitary condition of this city, at the present time, is set forth in a forcible and interesting manner in the annual report or the Board of Health, drawn up by our indefatigable friend Dr. Barton.

We are also greatly indebted to Dr. J. C. Simonds for his laborious investigation of the *mortality of the city*. No one can form an adequate conception of the amount of labor expended on such reports as the two last mentioned, unless he has attempted the task himself.

It will be seen from these reports, that the *sanitary condition* of the city is still *very bad*, and the *mortality very great*. Let us not deceive ourselves, nor "lay the flattering unction to our hearts," that we are blest with as fair a portion of health and longevity as falls to the lot of any other city of equal size; but rather let us look the facts sternly in the face, and endeavor to find a remedy for every existing evil. We shall never commence the great business of reform, until we have become fully aware of our real condition. Little or nothing has ever yet been done *directly* and *expressly* with the view to improving the sanitary condition of the city of New Orleans. True, we have derived, *incidentally*, considerable benefit from improvements established for the purpose of facilitating commerce; but we trust the time is not far distant, when this intelligent community, enlightened by the investigations of the medical profession, will adopt all necessary measures for rendering our city, as it may be, both a pleasant, and safe abode, at all seasons of the year.

This brings us to the inquiry, whether *it is possible* to rid New Orleans of its great pest and drawback, yellow fever, or to divest it of all its terrors? We hope and believe it is, as other cities have

been infested with diseases for many years, which disappeared in the progress of improvement. Yellow fever did not appear in ours till many years after its establishment, nor does it prevail in our immediate vicinity at this time; from which, it is but reasonable to infer, that it *must depend upon some condition of things within our corporation*, which we may hope to discover and correct; and then our citizens will only be liable to the ordinary endemic fevers of the South. The press of business upon us, at this time, forbids our going more fully into the subject. At a more convenient season we shall call it up again, devote our best energies to its elucidation, and invoke the aid of our able professional brethren. It is a subject of vast importance, and well worthy the patient investigation of the philanthropist and philosopher.

The late Inundation.—We must here allude, briefly, to this extraordinary occurrence. The levée gave way at Mr. Sauvé's plantation, on this side of the river, about the 3d of May. The water soon came down upon the back part of the city, and overflowed nearly all of it in the rear of Apollo, Carondelet and Dauphine streets. It stood upon this part of the city until the 18th of June—a period of about *forty days*. As soon as the crevasse was stopped, the water receded rapidly from the city, and was, fortunately, followed by heavy rains, which washed off all its filthy deposits. The city authorities then had lime spread along the gutters of all the streets that had been inundated, which made every thing uncommonly neat and clean. We are compelled to believe that this overflow was decidedly beneficial to the health of the city. The fevers of the summer and autumn were of an unusually mild character. Upon examining into the history of the city, we found that such had been the effects of all similar, previous overflows, but the year following was always sickly. We shall soon see whether the analogy will be maintained.

The reader is referred to the following part of this report and to Mr. Forshay's paper, for a more full account of the overflow.

III. A monthly statement of the general aspect of the weather, the stage of the river, the condition of the streets, and principal diseases prevailing in the city of New Orleans, for the year 1849.

January.—The new year was ushered in with a *white-frost*, the welcome harbinger of returning health—our city being at

the time severely scourged by an epidemic of *cholera*. For two weeks we had suffered greatly, but the epidemic had already begun to decline, and by the 10th of the month, the daily number of deaths by cholera fell from eighty-four down to twenty-five. Cholera, however, continued to be the principal disease throughout the month, causing more than one-half of the entire mortality. According to the records of the Board of Health, the total number of deaths from all diseases was 1,194; from cholera, 614. The customary winter diseases, catarrh, bronchitis, pneumonia, eruptive fevers, &c., were also met with.

The general aspect of the *weather* was much more favorable than that of the preceding month. It was for the most part cool and dry. According to Dr. Barton's Journal:

The thermometer ranged from 79° to 38°, average 58°.17
The barometer " " 30.42 to 29.85, " 30.176
Number of rainy days 13.5
Quantity of rain 3.715 inches.
Winds principally from N. and N. E.

The *streets* were as filthy and muddy as they need be, but their condition was improved toward the last of the month.

The *river* was full for the season.

February.—This month was quite different from the last. The city had become comparatively healthy; there appeared to be less of the ordinary winter diseases. The cholera had long ceased to be called *epidemic;* though it still lingered amongst us, causing some eight or ten deaths daily. The number of deaths by this disease, for the week ending the 17th, was sixty-four. During this month there appeared some desperate cases of *dysentery*, a number of which terminated fatally in spite of medical skill. Diarrhœa was prevalent, but quite manageable, if taken in time.

During this month a large number of foreign emigrants arrived at this place, bringing with them the *ship fever*. The admissions into the Charity hospital show a great increase of this disease at this time.

The total number of deaths from all diseases was 564.
" " " " cholera 183.

Showing a very notable improvement in the public health.

During this month we had some of the coldest *weather* ever experienced in New Orleans. The ground was frozen for several days, and we had considerable sleet, which covered the house tops and gave quite the appearance of a northern city. According to Dr. Barton:

The thermometer ranged from 77° to 28°
The barometer " " 30.51 to 29.70
Number of rainy days 3
Quantity of rain 3.007
Winds principally N. and N. E.

The *streets* were in as good condition as we usually see them at this season.

The *river* was higher than almost ever known at this season, causing serious apprehensions of an *overflow*. Several crevasses have already occurred.

March.—This month opened upon us with almost summer weather, and a fresh outbreak of cholera. We were doomed to a second epidemic, but little less fatal than the first. The following weekly report of deaths during the month is taken from the records of the Board of Health.

	Total.	Cholera.
Deaths for the week ending 3d of March,	112	25
" " " 10th "	162	50
" " " 17th "	296	116
" " " 24th "	421	287
" " " 31st "	378	238
	1369	716

It will be perceived that this list of deaths embraces four days of the preceding month. During this time *ship* or *typhus fever* was prevailing extensively at the Charity hospital, contributing largely to the mortality of the month. A great many foreign emigrants arrived during this month.

The *weather* was for the most part pleasant and dry:
The thermometer ranged from 80° to 47°, average 66.48
The barometer " " 30.28 to 29.72, " 30.033
Number of rainy days 1.75
Quantity of rain 1.718
Winds chiefly S. and S. E.

The *river* was remarkably high. By means of culverts in the levèe, the water was pouring through the cross streets of New Orleans and Lafayette. The overflow in the upper part of the State has already done great injury to the plantations.

April.—The diseases of this month were pretty much the same as the last—cholera was still predominant, though declining. The weekly mortality was as follows:

	Total.	Cholera.
Deaths for the week ending 7th of April,	228	117
" " " 14th "	197	73
" " " 21st "	232	101
" " " 28th "	177	60
	834	351

We see here a marked decline in the mortality, though still very great. Cholera was not considered as prevailing to an *epidemic extent* after the 15th of the month.

The *weather* during this month was very extraordinary—for the most part cool and dry; but on the 15th there occurred one of the most remarkable changes ever witnesed. Early in the morning it was raining, but in a few hours it ceased, and before night, we were transported, as it were, from the genial temperature of spring into the depth of winter. A strong north wind was blowing, and fires and winter clothing were indispensable to comfort. The cold weather continued for five days, and, so heavy were the frosts, that beyond two degrees north of us all vegetation was killed. This cold spell of weather seemed to check the progress of cholera very decidedly.

The thermometer ranged from 78° to 44°, average 67.03
The barometer " " 30.23 to 29.77, " 30.057
Number of rain days 1.25
Quantity of rain 2.955
Winds chiefly N. and N. E.

The *streets* were dry and the dust oppressive.

The river has appeared to recede a little, though new crevasses are continually occurring and doing immense injury. Our citizens are much alarmed at the prospect of an overflow. The river is at the top of the levèe.

May.—This month will be ever memorable on account of the occurrence of *Sauve's Crevasse*, through which a great portion of the city was inundated by the Mississippi. As before stated, the citizens of New Orleans had been under continued apprehension of an overflow for some weeks past. The water was at the very top of the levèe, and many laborers were employed in raising it by putting on more dirt. Various precautionary measures were discussed in the newspapers and city councils, but none could be agreed upon; and whilst the public mind was engrossed with the subject, on the morning of the 4th the long dreaded calamity was announced; the levèe had given way at the plantation of M. Sauvè, about fifteen miles in the course of the river above the city, and the mighty torrent was rushing in upon our rear. Even now the danger was not fully appreciated by the city authorities. Aid was promptly sent up to Mr. Sauvé, but by no means sufficient for the occasion. For one or two weeks some hopes were entertained that the crevasse would be stopped; but these proved to be vain and illusive. The torrent of water rushed onward, the swamp soon became full, and the water gradually encroached upon the rear of the city, so that, by the 15th, about one-third of the second municipality was inundated. This remarkable and extraordinary occurrence possesses so much interest that I shall not attempt to give a minute account of it in this place, but make it the subject of a special report. I may state in this connection, however, that the water stood upon the back parts of the first and second municipalities up to Carondelet and Dauphin streets until the 18th of June, when the crevasse was stopped.

The *prevailing diseases* were pretty much the same as those of the preceding month, and to a greater extent, as will be seen from the following:

	Total.	Cholera.
Deaths for the week ending 5th of May,	225	114
" " " 12th "	235	127
" " " 19th "	202	113
" " " 26th "	193	95
	755	449

This includes two days of the last month, but wants five days of the present. Diarrhœa prevailed to a considerable extent, but did not display so decided a tendency to run into cholera.

The *weather* was generally warm and rather wet.

The thermometer ranged from 85° to 64°, average 74°.
The barometer " " 30.15 to 29.74, " 29.957.
Number of rainy days 3.50.
Quantity of rain 4.27.
Winds chiefly S.

The *streets* were wet and muddy. The inundated district was traversed by numerous skiffs and canoes, the principal landings being where Baronne street crosses Common and reaches Canal street. Elevated plank side-walks were arranged in the principal streets in this district. Many families retained their residence in the upper stories, and appeared to be little affected by the surrounding water. The physicians had to practice in skiffs instead of carriages. An offensive odor was exhaled along the borders of the inundated district, where the filth from the gutters was arrested; but, further back into deeper water, both the air and water were pure.

June.—This month was characterized by hot weather, frequent showers, a continuance of the overflow and a marked improvement in the public health. Bringing up our weekly reports from the last date, which include five days of May, it will be seen that the mortality was greatly diminished.

	Total.	Cholera.
Deaths for the week ending 2d of June,	120	69
" " " 9th "	182	82
" " " 16th "	153	66
" " " 23d "	118	47
" " " 30th "	113	31
	686	295

During the last week, the deaths from Cholera averaged *one* a day and continued to diminish.

Semi-Annual Statement of Mortality, from January 1st to July 1st. Deaths from all diseases, 5,402, cholera 2,608.—*Board of Health.*

Semi Annual Report of the Charity Hospital.

	Admitted.	Discharged.	Deaths.
Of all diseases, . . .	6,595	4,827	1,477
Of cholera, ...	1,400	691	964

It will thus appear that more than one-half the entire mortality of the city during these six months was caused by cholera; and about two-thirds of the deaths at the Charity Hospital.

The *weather* was very warm, with frequent showers.

The thermometer ranged from 88° to 71,° average 79°.

The barometer " " 30.15 to 29.80, " 30.001

Number of rainy days 4

Quantity of rain 5.250

Winds chiefly S.

The *streets* were extremely muddy.

The *river* maintained its extraordinary high stage at New Orleans till toward the end of the month, when it began to fall.

Stopping the Crevasse.—On the evening of the 18th, the renowned *Sauve's crevasse*, the source of so much injury to our city, was stopped through the indomitable energy and professional skill of the city surveyors, Messrs. Dunbar and Surgi. As soon as this was effected, the water began to recede from the city, and in a few days the land re-appeared which had been covered with water *more than forty days*. Most fortunately, there fell at this time some heavy rains, which assisted greatly in washing off the filthy deposits in the streets.

July. This month was remarkable for the uniform high temperature, the extraordinary quantity of rain, and the great improvement of the public health. Whilst the papers in all the principal cities of the West and North came to us teeming with disastrous accounts of the *death-dealing cholera*, New Orleans was exempt from all epidemic influence, and her citizens could return the sympathy so freely extended to her in her late period of affliction. There was so little to do among the physicians here, that many of the principal practitioners were allowed the rare privilege of travelling abroad in search of amusement and relaxation.

	Total.	Cholera.
Deaths for the week ending 7th of July,	101	14
" " " 14th "	98	4
" " " 21st "	70	2
" " " 28th "	66	2
	335	22

It is a remarkable fact, that, during two days, 23d and 24th of July, no death occurred in the Charity hospital.

The fevers of this month were chiefly intermittent, though there was an increase of remittents, some cases of which showed a tendency to hemorrhage. We heard of several cases in private practice which were pronounced *yellow fever;* but, as they recovered, the diagnosis could not be so free from doubt as if they had terminated fatally with *black vomit* or other hemorrhage. They turned quite yellow after the crisis. On the 29th there was a decided case of yellow fever on St. Joseph street, which subsequently died with *black vomit and hemorrhage from the bladder and bowels.* This case was seen by several experienced physicians who expressed no doubt in regard to it. On the last day of the month a man died with *black vomit* at the Charity hospital, and there were supposed to be other cases in the house.

During this month there occurred an unusual number of cases of *bilious colic.* There were also some severe cases of *dysentery* and malignant intermittent fever, which terminated with yellowness of the skin.

The *weather* was oppressively hot throughout the month, with an extraordinary fall of rain.

The thermometer ranged from 85° to 73,° average 78.74
The barometer " " 30.16 to 29.89, " 30.042
Number of rainy days, 8.75.
Quantity of rain, 14,171 inches.
Winds chiefly S.

The *streets* were in a horrible condition, especially those which are not paved. These became so bad that the milk-men had to lay aside their carts and resort to *sleds* and *horseback.* Grass and herbage were seen to grow over many unpaved streets in the first and second muncipalities, which in ordinary times, are much travelled.

The *river* fell considerably during this month, though it still continued very high. Toward the last of the month it commenced rising again.

August.—The general character of this month was much like the last—*hot, wet and healthy.* It was, probably, the healthiest August ever experienced in New Orleans. There were some deaths from yellow fever and cholera, but of the latter so few as to attract no attention. The general character of the fevers was mild, and they were easily cured, if taken in time and treated properly; but, if neglected or maltreated, they almost invariably

displayed a tendency to death, by *hemorrhage*, and were then called *yellow fever*.

The *bilious colic*, before mentioned, prevailed more extensively during this month; but, this will be the subject of a special report. To continue our weekly mortuary report—

	Total.	Cholera.	Y. Fever.
Deaths for the week ending August 4th	86	1	1
" " " 11th	117	0	6
" " " 18th	106	2	2
" " " 25th	114	1	2
" " Sept. 1st	80	0	6
	417	4	17

The *weather* was oppressively hot, day and night. Seldom had we ever experienced such warm nights in the month of August. There was also a great quantity of rain, though not quite so much as in July.

The thermometer ranged from 87° to 74,° average, 80°.
The barometer " " 30.14 to 29.92, " 30.047
Number of rainy days, 5.75
Quantity of rain, 4.473 inches.
Winds chiefly S. and W.

On the last day of the month there was heavy rain, with much thunder and lightning. A vessel at the wharf was struck by lightning.

The *streets* were very muddy.

The *river* rose, at this place, to within twenty inches of the late highest stage. This was caused by an extraordinary overflow of the Red and Arkansas rivers—particularly the former, where immense injury was done. On the last day of the month, the river had fallen, at this place, about four feet, and was steadly declining.

September.—This month was, for the most part, warm and dry. There were many cloudy days, but very little rain. The general health continued very good, and the physicians had but little to do in private practice, but the admissions into the Charity hospital were large. The sickness was almost confined to the lower or laboring classes of people. Cases of colic, dysentery, diarrhœa and yellow fever, were met with in private practice Boils and whitlows were also very common. The weekly reports of deaths, by the Board of Health, were as follows :

	Total.	Y. Fever.	Cholera.
Deaths for the week ending Sept. 8th,	109	16	0
" " " 15th,	137	26	1
" " " 22d,	158	57	0
" " " 29th,	269	78	1
	573	177	2

Of the 177 deaths from yellow fever, 153 occurred at the Charity hospital. We have never before known such a disparity between the amount of yellow fever in this hospital and in private practice. It arises from the mildness of the attack and general type of the fever, which leads many ignorant laborers to think they have no serious disease. The consequence is, that most of them postpone applying to the hospital till they have been sick from three to six days, when their cases are beyond the reach of remedies. Many have entered in a moribund state. The fever often begins as an intermittent or mild remittent; but if neglected or maltreated, in unacclimated subjects, it seldom fails to terminate in plain yellow fever, with yellowness of the skin and eyes hemorrhages or black vomit. Some run into a typhoid state, and linger many days.

The yellow fever of this season is a good deal like that of 1846. It has been steadily increasing since the first of August, and, probably, has not yet reached its acme. The wards of the Charity hospital having been greatly extended this year by the removal of the insane and the addition of the new buildings, we find a corresponding increase of patients, notwithstanding the healthiness of the season. The number of patients on the first of October was 1,050; at the same date, last year, 540.

The *weather*, as before stated, has been warm and cloudy. From the 12th to the 19th we had something of an equinoctial spell of rain and wind, but comparatively mild. The 22d and 23d were fair and warm.

The thermometer ranged from 87° to 65°, average 78.°
The barometer " " 30.17 to 29.76, " 30.019
Number of rainy days, 3.25.
Quantity of rain, 2.600 inches.
Principal winds N. and N. E.

The *streets* were pretty free from mud, but the pavements were in bad order.

The *river* has fallen steadily, and is now pretty low.

October.—This month was very variable—for the most part cool and pleasant. We had rain on nine days—on the 3d and 15th very heavy rains. During the second week the weather became quite cool, and fires were comfortable, but we had no frost. There was a killing frost, in the country, a little north of us. It became quite warm toward the last of the month.

There was but little sickness seen in private practice, though somewhat more than in the last month. We had more yellow fever, but nothing like an epidemic. The general character of the fevers was much like that of September. Intermittents and mild remittents were common. If treated early and properly, they readily yielded; but, if neglected, they seldom failed to terminate in yellow fever. Several physicians told me they noticed this in private practice. Cases which they had no idea of pronouncing *yellow fever*, in the commencement, proved to be so in the sequel. There continued to be the same disproportion in the amount of the yellow fever at the Charity hospital and in private practice that was noticed in the last month, and to be accounted for in the same way. The lower classes will not apply for medical aid until they become really ill— often too late for successful treatment. It was interesting to witness the tendency to hemorrhage in all the prevailing types of fever. These hemorrhages were always critical, and generally favorable, if they took place from the gums or nose. Many were lost however, for want of that careful nursing, which cannot be obtained in the Charity hospital. We shall give a fuller account of the yellow fever of the season in a special report.

Dysentery has prevailed to a considerable extent.

Diarrhœa was also common. There were a few very decided cases of cholera, both in private practice and in the hospitals. Most of the cases originated in the city—at least, they occurred in persons who had been here a long time. We had sufficient importation of cholera, both by ships from Europe and steamboats down the river, to have caused an epidemic, if the disease could be spread in this way; but we heard of no instance in which it was communicated from the sick to the well.

From the 30th of September to the 1st of November, there were eight deaths by cholera at the Charity hospital. These cases were all into a hopeless state of collapse when they entered. Sporadic cases occurred in various parts of the city during this time.

On the 15th, the ship "*Cromwell*" arrived here, having set out from Havre, on the 10th of September, with 204 steerage passengers. Cholera was prevailing at Havre when she left, but the passengers were inspected by a physician, before starting, and pronounced to be in a healthy condition. Nevertheless, a case of cholera appeared on board, the first day, which terminated fatally. Cases continued to occur, from day to day, till the 11th of October, when the disease suddenly ceased. The vessel was then near the Balize. No more cases occurred, either coming up the river or whilst the passengers remained on board at New Orleans. They remained here but a few days, and then went on up the river. There were twelve deaths from cholera on the voyage.

On the same day (15th October,) the steamboat "*Gen. Lane*" arrived here from Louisville, Ky., having lost three or four passengers by cholera on the trip down the river. A man who came down on this boat was seized with cholera soon after arriving here and went to the Circus street Infirmary, where he suffered a dangerous illness, but finally recovered. About this time, other boats came down the river, having had cases of cholera on board yet there was no epidemic at any of the cities or towns in the West. The disease sprang up spontaneously, on board the boats.

On the 23d, the ship "*Berlin*" arrived from Liverpool, having left there on the 5th of September, with two hundred and six steerage passengers—English and Scotch. There was cholera at Liverpool when she left, but these passengers only remained there about twenty-four hours. They were examined by a physician, and pronounced to be in excellent condition. On the tenth day of the voyage (15th September) the cholera broke out amongst these passengers, and prevailed terribly till the 6th of October, when it suddenly disappeared. There were forty-one deaths on the voyage. She arrived here on the 23d of October, with five or six sick passengers, but no cholera. These passengers were of a superior order. The vessel was ordered to the other side of the river, where the emigrants remained on board a day or two, and then went up the river to the western country.

We have here much stronger evidences of *importation* than were presented by the "*Swanton*," in December last—ships directly from infected ports, having cholera on board recently, and steamboats with cases. And, to prove that the state of the atmos-

phere in New Orleans was not inimical, sporadic cases of genuine cholera were occurring almost daily. Yet we have no epidemic; but we only mention these facts *en passant*. We shall enlarge upon them in our report on cholera. We continue the weekly reports of the Board of Health:

	Total.	Y. Fever.	Cholera.
Deaths for the week ending Oct. 6th,	222	122	3
" " " 13th,	205	109	1
" " " 20th,	191	94	0
" " " 27th,	172	72	2
	790	275	6

It will thus be seen that yellow fever reached its zenith in the second week of this month, and is now steadily declining. We have had some apprehensions of another epidemic of cholera, but the disease does not appear to increase.

Our previous remarks on the general aspect of the *weather* renders it only necessary to give the following abstract:

The thermometer ranged from 83° to 52,° average, 66.68
The barometer " " 30.35 to 29.72, " 30.050

Number of rainy days, 6.

Quantity of rain, 6.45 inches.

Principal winds N. and E.

The *streets* have been in somewhat better condition than for the previous three months, but bad enough at that.

The *river* has been low.

This being the year for the State elections, a large number of persons returned early to the city. The two great political parties were out in processions and public meetings, to a late hour every night, and all sorts of indiscretions were committed. Yet all this caused but little sickness.

November.—This month has been unusually warm and rather dry. It rained on five days—heavy rains on the 22d and 30th. After every rain the weather turned cool, and upon one or two occasions it approached frost very closely, but we had nothing like white frost. Weekly statement of deaths by the Board of Health:

	Total.	Y. Fever.	Cholera.
Deaths for the week ending Nov. 3d,	148	47	7
" " " 10th,	158	40	5
" " " 17th,	153	36	8
" " " 24th,	151	14	26
" " December 1st,	169	6	63
	779	143	109

There was considerably more sickness than in the last month. The principal diseases were cholera, dysentry, diarrhœa, intermittent fever, yellow fever, and a few cases of bronchitis and pneumonia. Cholera increased to an alarming extent about the 23d of the month, and caused something of a panic. During the week ending on the 25th, there were twenty-six deaths from cholera at the Charity hospital, and thirteen from yellow fever. Sporadic cases of cholera appeared in various parts of the city, and the disease soon ran its fatal course, if not promptly arrested. The usual premonitory symptoms were always presented, and there was seldom any difficulty in relieving them, if taken in time; if neglected, they seldom failed to run on to a fatal termination. It was by no means confined to immigrants, but occurred amongst all sorts of people, whether they had recently arrived or been here all the year. The condition of those admitted into the Charity hospital was much the same as it was during the epidemic in the winter and spring: but few applied before they were in a hopeless state. The disease cannot be said to have been *epidemdic*, but *sporaic* to a very considerable extent. Cholera patients were admitted into all the wards of the Charity hospital, and no evidence of infection or contagion was to be seen. A very large number of vessels arrived during the month, some of them bringing many European emigrants. On the 26th, the ship "*Gipsey*" arrived from Liverpool, having started with upward of three hundred emigrants, all in good health and condition. After being twenty days at sea, the cholera appeared on board and killed nineteen. It subsided completely, long before reaching New Orleans, as it did on the "*Cromwell*" and "*Berlin*" mentioned last month. A few days afterward, the ship "*Fingal*" arrived, having suffered in the same way, but came here without any cases of cholera on board. Toward the last of the month, cholera seemed to diminish con-

siderably in private practice; but in all probability, we shall continue to see cases for the next six months.

Yellow fever was to be seen at the Charity hospital throughout the month, presenting the same character and appearance as was observed in October. Intermittent fever was exceedingly common.

On the evening of the 15th, there occurred, at our levée, one of the most terrific steamboat explosions ever witnessed. The steamer "*Louisiana*," of the largest class, when in the act of starting off, had her boilers to explode, killing and wounding a great many persons, seriously injuring the steamers *Bostona* and *Storm*, and sinking herself in a few minutes. The most of the wounded were taken to the Charity hospital as fast as they could be, and there presented a scene which, we may presume, strongly resembled a field of battle, or the "*cock-pit*" after a bloody sea-fight. All was hurry and commotion. The house resounded with the groans of the wounded, mingled with the tramp of hurried footsteps, the floors of several wards were covered with mangled invalids, the surgeons, with bare arms and bloody hands, were lopping off limbs and dressing wounds, and the students, nurses and apothecaries, were as busy as possible supplying the necessary implements, whilst a crowd of anxious friends and spectators were moving about, from place to place, endeavoring to render what assistance they could. A number of patients were also taken to the *Maison de Sainte* and the Circus street infirmary, which presented similar scenes, though on a smaller scale. A large number of the sufferers by this terrible explosion, died after undergoing surgical operations and a tedious course of treatment. We give below a special account of this catastrophe from one of our daily newspapers.*

"*A full history of the awful Explosion of the Louisiana—the cause of the catastrophe—its effects—a corrected list of the killed, wounded and missing.*

"It was Thursday, the 15th of November. The day was quiet and beautiful—all nature seemed happy, contented and smiling. The bright haze which marks the Indian summer of our climate hung in the air, and softened the rays of the setting sun, as it descended behind our city. As the day neared its exit,

* The New Orleans Delta.

the hum and buzz of life began to grow fainter—the turmoil of trade became less distinct.

"Our city was just recommencing its career of busy prosperity, rejuvinated and invigorated by the long vacation. Our people were full of hope ,joy and elasticity of heart and spirits. Recent calamities were forgotten. The remembrance of the gaunt pestilence, which last winter desolated our city, with all its grizzly horrors, had ceased to oppress their energies; the desolating wrath of the Father of Waters no longer lingered, like a dark cloud, over the minds of men. All looked forward to a bright and brilliant future for our city.

"It was in this state of the minds of our people, on the day mentioned, at half-past five, P.M., that suddenly the whole city was shaken, from center to circumference, by a tremendous report, the noise of which resembled that of the simultaneous firing of a large park of artillery, and its effects were similar to those of an earthquake. This report stunned and alarmed the whole city. The glass in the windows of the houses on the levée shivered and fell to the ground. People rushed to their doors and windows, and looked toward the river. There a strange and startling sight presented itself. A vast volume of smoke, cinders and broken fragments, were hurled into the air, like burnt feathers blown through a funnel, and fell for many a rood around. Huge masses of heavy iron and timbers were thrown in every direction; beds, chairs, every article of furniture, and the endless variety of freight of our western steamboats, were converted into formidable missiles, and scattered around with the destructive power of grape-shot. Among these missiles, the keener-eyed and more self-possessed could descern human bodies and limbs, hurled into mid-air, from which they fell into the river, causing the water to bubble up, and tinging it with blood for yards around. A crowd of people rushed toward the levée from every cross street, and encountered an opposing crowd, which seemed to be flying, in the greatest alarm, in an opposite direction. The cry went forth, 'The Louisiana has blown up! hundreds are killed!' As the noise, the roar, the echo of the explosion died away, a terrific commingling of screams, of cries for help, of loud calls of officers giving orders to men, and the rush of the multitude, succeeded. Among the frightened, panic-stricken crowd that fled toward the city, there were many who tottered and swayed to and fro in pain, and barely dragged themselves along, with bodies streaming with blood, with broken limbs and bruised frames.

"Soon, however, numbers of bold men rushed aboard the crumbling, sinking wreck, whence proceeded the explosion. Beneath the machinery and the crushed timbers, a hundred poor creatures writhed in mortal agony, and many bodies lay helpless and mutilated; others could be seen struggling in the waves and screaming for help. The cry proved too true: the Lousiana, a

large and fine steamboat, bound for St. Louis, and crowded with passengers, had exploded her boilers and scattered death and destruction all around. She was on the eve of leaving the wharf. Her crew consisted of more than forty souls; her steerage passengers were thirty in number, and her cabin passengers were more than sixty. A number of friends of the passengers were also aboard, and many clerks and business men getting their bills of lading signed.

"Whenever boats are just about to leave, before the ringing of the last bell, a large crowd always collects on the forward deck, over the boilers. Such was the situation of the Lousiana before her awful explosion. Not less than two hundred souls were on board of her at the time. The Louisiana was not an old boat. Her machinery was that of the Governor Jones, and her boilers once belonged to the Memphis and the Dallas. Her captain is a young man of some experience in steamboating, but little acquainted with machinery. Her first engineer was absent on leave. The second engineer was ignorant or careless. He had neglected to ascertain if there was water in the boilers, or, in working the pumps, which were near the bottom of the river, he had been heaving mud instead of water. The absence of sufficient water caused the fire to heat the boilers red hot; the water thown in was heated too fast—it boiled and bubbled, and was converted into steam too rapidly for the cylinder to discharge. The captain stood at the gangway, conversing with the agent. Presently he gave the order to get ready; the engineer responded with his bell. Ere its tingle had ceased, the explosion occurred—the engineer was hurled into eternity—the captain was struck to the ground—the pilot, by his side, was torn to pieces, and, besides the hundreds destroyed aboard, the iron hail scattered destruction far and wide over the broad open space of the levée. Hurling masses flew high in the air. One of them, the half of a boiler, was thrown eight hundred feet from the river, killing a man and a horse more than six hundred feet from the river, and cutting through iron pillars eight inches in diameter. Nor did the destruction end here. The Bostona, a beautiful and costly boat, lay on the right of the Louisiana. Her hull was torn and crushed, her gallant captain was badly wounded, and others aboard of her were injured. On the left of the Louisiana, came in the Storm, just from Louisville. Providentially, nearly all her passengers, impatient to see their friends and families, had got off at Lafayette. The circumstance saved many lives. Still the destruction on board of her was awful. Her shattered and crushed hulk presents an appearance of ruin and desolation, which can only be appreciated by those who have seen it. A hundred cannon of the largest caliber, fired into her, could not have produced more ruin and destruction. The captain was struck down, and with difficulty dragged himself from the ruins. Several aboard of her were killed immedi-

ately; among these, an interesting lady, the wife of the clerk, Mr. Moody, leaving a beautiful little daughter, whose delicate figure, hanging over the bowed head of her afflicted father, as he sat amid the ruins the next day, drew tears to the eyes of the most stern-hearted.

"Nor did the destruction end with the Louisiana, the Storm, the Bostona and among the crowds on the wharf; it extended to the fruit boats that cluster around all steamers just as they are about to leave, and many a poor Italian and Spaniard who a few minutes before had been gaily crying out the virtues of his fruit, was crushed amid the falling ruins. To the praise and glory of the survivors, be it stated, that these poor fruiterers were among the most active in rescuing persons in the water and from the wreck. Numbers of philanthropic citizens rushed to the rescue of the sinking. All who were in the ladies' cabin, unfortunately but two, were saved unhurt. These did not, however, include all the females aboard. Those below deck were all crushed and killed. How many there were, God only knows. There was no want of help—of philanthropic citizens, who rushed, in numbers, to the rescue of the victims. Many were saved, but, alas, too many of them only to add a few days of intense suffering to their lives. On the levée the sight was too horrible for description. Scores of blackened, mutilated bodies, lay quivering and palpitating in every direction. Others, less mortally wounded, crawled along, as if using the last remnant of strength, in hurrying off from the awful scene. All ages, sexes and conditions, were mingled together in one mangled mass. The form of the delicate female lay besides the stalwart muscular frame of the laborer and the drayman. The gentleman of means and fine dress embraced, in the agonies of his death, the poor, ill-clad negro. The number of vehicles was insufficient to transport the wounded. Every means was employed by our energetic police, in removing them. Soon were our hospitals crowded with the wounded, and our watchhouses filled with the dead.

"That night was a gloomy and sorrowful one in New Orleans. Every minute added to the horrors of the awful occurrence; the names of the killed began to be known, their persons to be identified. Fast flew the mournful intelligence, and crowds assembled at the depository of the dead, inquiring for relations and friends. To the real agony of those who had learned their bereavement, was added the not less intense apprehension of hundreds who were filled with the fear, that more of their friends, whom they had momentarily missed, were included in the fearful list of mortality. The next day began to reveal the extent of the destruction. Forty-four dead bodies lay in the watchhouse, now become a dead-house. Many others had been surrendered to relatives and friends, and others lay in the deadhouses of the hospitals. It appears that the number of dead discovered and

recognized, and of the missing, who are given up as dead, is seventy-one; and the wounded, many of whom will die—nearly all of whom are mutilated and deformed for life—is twenty-nine.

"This is a fearful list of mortality, and yet, we believe, it falls short, by fifty, of the real number killed by this disaster. The large number of unknown and poor people, who were on the boiler deck of the boat, the deck hands, the poor fruiterers, who were crowded about her bows—among these, the mortality must have been very great. If so many of our own citizens, well known, and whose bodies have been so earnestly sought after, have not been found, how many must there be of the friendless strangers, in relation to whom no information is possessed? Nearly one-half of those whose bodies have been recovered, were killed on the wharf or the adjoining steamboats. Those who were sitting in the saloons, just over the boilers, as well as the steerage passengers and most of the crew, have not been heard of. Many of them have been blown to atoms; many were carried down by the sinking wreck, and many were wafted into the current, and will never be heard of again."

The list of killed and wounded must be omitted. We regret to state, that amongst the number were two respectable physicians, viz., Dr. Thomas M. Williams, of Thibodaux, on Lafourche, and Dr. E. J. Marsh, of Milwaukee. The former was accounted one of the best practitioners in Louisiana; the latter had just returned from California, and had with him a journal of his travels and several bags of gold dust.

The dysentery which prevailed during this month was easily relieved by a combination of quinine, blue mass and morphia, if taken in time. There were 1,448 patients admitted into the Charity hospital during this month. The number of deaths two hundred and sixty-nine; of which, ninety-seven died of yellow fever, and sixty-six of cholera. During the last week, there were thirty-five deaths by cholera, and only five by yellow fever.

The *streets* were in a tolerable condition.

The *river* is low, but beginning to rise already. We hear that the upper rivers are high.

The thermometer ranged from 79° to 46,° average 63°
The barometer " " 30.30 to 29.83, " 30.044
Number of rainy days, 3.25
Quantity of rain, 3.945 inches.
Principal winds N. and N. E.

December.—The most remarkable thing about this month has been its striking resemblance, as respects the general aspect of the weather, to December last, when epidemic cholera prevailed

so severely. There were three or four cold spells, with one or two white frosts about the 4th, but the month was for the most part warm, and we had much of the same damp, murky weather that was witnessed the same time last year. This was a common remark about the city. And we had the disease throughout the month, but to a comparatively limited extent—showing that whatever be the *real cause* of cholera, it is extraneous to the appreciable meteoric condition of the atmosphere. After the white frost on the morning of the 4th, cholera delined very perceptibly, so that during the week, the 17th to the 24th, there were only four deaths from it at the Charity hospital; but after this it increased again and there were seven or eight deaths at this hospital. As in December last, many persons complained of slight uneasiness of the bowels. Cases of dysentery and obstinate diarrhœa were met with; also, some cases of pneumonia, bronchitis, scarlatina and intermittent fever—but no disease prevailed to any great extent. The physicians have had very little to do during the month. Small-pox was brought amongst us both by sea and down the river, but this disease never effects the community at large. It is surprising how much vaccination is still neglected. An occasional case of yellow fever was met with, till the last of the month. On the 29th Dr. Hester saw a young man dying with *black vomit*, in private practice. On the first of January following, we had, in our wards at the Charity hospital, two cases with fever, yellowness of the skin and eyes, and hemorrhage from the nose and gums.

Toward the last of the month, *typhus* or *ship fever* began to increase notably at the Charity hospital, and a few cases were met with amongst the citizens in private practice. We continue the weekly report of the Board of Health:

	Total.	Y. Fever.	Cholera.
Deaths for the week ending December 8th,	174	2	43
" " " " " 15th,	133	3	38
" " " " " 22d,	116	2	14
" " " " " 29th,	120	1	16
	513	8	111

The thermometer ranged from 78° to 33,° average 57.33
The barometer " " 30 39 to 24.58, " 30.090
Number o. rainy days, 4.50
Quantity of rain, 2,365 inches.
Principal winds N. and N. E.
The *streets* have been extremely muddy and filthy.

It appears that the *river* has never gotten down to low-water mark this year. So early as the 10th of December it had risen so rapidly as to cause serious apprehensions of another overflow. Our city newspapers have given due notice and endeavored to direct the attention of muncipal authorities and the public to the subject. We believe it is contemplated to open a canal from the river above the city to the lake in the rear; but as yet nothing has been commenced. A few days ago, a crevasse occurred on our side, thirty-six miles above the city. On the 31st, the river was only about four feet below high-water mark, and constantly rising. The prospect of another inundation is now more imminent than it was twelve months ago. If such a calamity should befall us, however deplorable, it would be but a just retribution for our supineness. Our city *can be* secured against inundation by the river, and we must do the work or suffer the consequences.

Thus have we concluded our journal for the year. It is rude and imperfect; but, if similar contributions were received from various parts of the Southern States, they would aid greatly to make up the medical history of the times. As this work was not projected till about the middle of the year, our notes of the first months are not so full as we should desire. This defect will be corrected in future. The year has been a very unfavorable one to the physicians of New Orleans. During the first part, we had an immense deal of labor and care, with but poor compensation; and in the middle and later parts, we had but little practice, and of course, small remuneration.

REPORTS FROM LOUISIANA.

ARTICLE II.—On the inundation of New Orleans in 1816.

Introductory Remarks.

Many persons abroad, when informed that the site on which New Orleans is built, is so much below the height to which the Mississippi river rises every year, that the keels of steamboats and ships may be seen on *a high ridge over-looking the city*, readily entertain the apprehension that we are annually in danger of being overwhelmed by the mighty torrent; but, experience has long since proven that these fears are unfounded. So firm and compact is the *levée* on the river bank before the city, that it is almost impossible for it to give way, although the water sometimes reaches the very summit, and when a *crevasse* or rupture of the embankment occurs above the city, the waters find exit into the Lake without overflowing as much as half of the city, and that the least important part. Judging from past experience, which is both ample and instructive, as well as the nature of the locality, it is most evident that the city of New Orleans *can be maintained perfectly secure from overflow, and ought never to suffer from such a calamity.* Yet it *has* suffered severely upon at least five occasions; in 1785, 1791, 1799, 1816 and 1849; and without a vigorous enforcement of all the measures now contemplated, we may soon suffer again.

The river now presents a more threatening aspect than it did twelve months ago, and has already done much greater damage along the coast above the city. Every thing relative to levées and overflows, has commanded much attention of late, both among the city and State authorities, and it is to be hoped that results, the most important and beneficial, will soon follow.

The State Engineer, Mr. Wooldridge, has discussed the matter fully in his Annual Report. We had hoped to give a long extract from this interesting report, but find we cannot do so, at least in this place. Mr. Wooldridge takes the position that the river has been dammed up too much—that several important natural outlets have been closed which should be opened, and the present natural outlets should be kept freely open, so as to afford greater facility for the escape of the waters.

Professor Forshay, in the able article which follows, maintains opinions directly opposed to those of Mr. Wooldridge.

We are greatly indebted to him for his interesting chapter of the Hydrography of the Mississippi.

In addition to this paper we have had an interesting report from a commission appointed by the Government and Legislature, "to inquire into the most effectual means of protecting the city of New Orleans from inundation."

The committee consists of the Mayor and five scientific gentlemen. After reviewing various schemes which had been suggested, they recommend the erection of an embankment, two feet higher than the high water of 1849, commencing on the river at the lower line of Greenville and running back to the Orleans Canal. At this time the measure is before the Legislature, and will probably be adopted. It has been violently opposed by the citizens of Carrollton, who are left just without its protection.

With the view to bring up the history of overflows in the city we have extracted from an old file of newspapers, all we could find relative to the crevasse and overflow of 1816, and will insert it at this place.

We invite special attention to the paper of Professor Forshay with its instructive drawings, which have been prepared with much care, and seriously offered as a contribution to our reports.

The Crevasse and Inundation of the City in 1816.*

"FRIDAY, MAY 10th, 1816.

"At 3 o'clock on the morning of Monday last, the levée at the upper part of the M'Carty plantation, (about two leagues

* From "*L'Amie des Lois and Evening Journal*," a French and English newspaper published in New Orleans in 1816.

above the city, if the windings of the river are followed, but hardly three miles in a direct line,) gave way at a point where it had six feet in height, and where the waters of the Mississippi were four or five feet above the level of the soil. As in all disastrous events, many causes have been assigned for this; but, putting aside the common reports, it appears probable that the ground was undermined by the current, as the levée was substantial and well made.

"In the evening of Monday, the *crevasse* presented an opening of but forty feet. We are assured that the City Council the same night, authorized the Mayor to afford prompt succour, a timely and judicious act; but it was not till the afternoon of Tuesday, that a crier muttered out an invitation from his *honor* to furnish negroes, with a promise to pay them for their labor.

"The same evening we went to the spot; nobody was at work, and the crevasse then presented an opening of about 170 feet; its depth was said to be five feet.

"On Wednesday the water was at the lower end of Custom-house and Bienville streets. Yesterday all Rampart street and the squares between Bienville and Canal, nearly as far as Dauphine street, were under water. At this time the lower parts of the suburbs Montegue, Lacourse, St. Mary, and Marigny, with the whole surface of the suburbs Gravier, Trémé and St. John, are under water. In the city you may go in a boat from Chartres down Canal to Dauphine street, then down Bienville to Burgundy street; from which point, descending St. Louis street to Rampart, you may proceed towards the lower suburbs, and again reach Dauphine street at its intersection by the public walk. Should the water continue rising, in forty-eight hours it may not be impossible to circumnavigate the city.

"The loss which this disaster has, or will occasion, is incalculable; besides the ruin of many large plantations and destruction of rich crops, many individuals who lived by the produce of their gardens, have their property inundated, and their daily income cut off. Already has the odious spirit of monopoly taken advantage of the public distress to double and treble the price of many of the necessaries of life. The inundation has driven many poor families from their homes; and should not those in affluent circumstances come to the aid of their less fortunate fellow-citizens, great indeed, we fear, will be the distress of the latter, from poverty, famine, and perhaps pestilence."

"Monday, May 13th, 1816.

"We wish we could give our readers some consoling promises respecting the evil which now afflicts our city; but unfortunately, up to this time, all efforts have been vain, and have only led to the conviction that extraordinary means and forces will be required to arrest the torrent of water which now covers our plain to the depth of three or four feet. The openings made in the levée, at the Fauburg Marigny, have caused a drainage of the water which prevented it from rising upon our part of the city at so frightful a rate as on the first days. From this it necessarily results that the Fauburg Clouet and a number of habitations previously secure, have been inundated in their turn. The complaint of those inhabitants is natural and well founded; but they ought to reflect that the water eventually would have inevitably gained the summit of the levée, which protected them; and that in forbidding this necessary work they would have endangered the entire city, without thus escaping the evil of the inundation.

"The Municipal Council has come to the succour of the indigent, and provided rations and lodgings for them; measures the more appropriate, inasmuch as some proprietors have not blushed to speculate upon the public calamity, by exacting the most exorbitant prices.

"It appears that the most definite measure relied on for stopping the crevasse, consists in sinking boats laden with heavy materials, and filling up the interstices with bags of dirt, to the amount of five or six thousand. M. Joublanc, who has charge of the work, speaks of this measure with an assurance which reanimates our hopes. We have known him for many years; he is an accomplished man, and not a mere pretender."

"Wednesday, May 15th, 1816.

"We have the satisfaction of announcing to our readers that the operation of sinking a three-masted vessel into the crevasse, has succeeded. It presents an obstacle to the current which allows time and the necessary latitude for conducting the work. Every thing seems to promise that the opening will be closed within a few days, and that the waters will have time to run off before the approach of hot weather."

"May 18th, 1816.

"The winds, which have blown from the east for two days past, have caused a reflux of the waters, so that since yesterday there has been a rise of seven or eight inches. It appears that new leaks have been opened on each side of the breach of the crevasse, since it was lately abandoned. Fortunately the river has fallen, and we learn from travellers who have arrived from above, that the winter was not so severe as usual, and that the melting of the snows would not, consequently, afford so great a volume of water. At Natchez the river had fallen more than four feet, and Red river had a current more rapid than the Mississippi, which is not the case when the latter backs up its waters."

In the paper for 22d May, we find the following advertisement which we translate from the French.

"The authorities which govern our city and parish, having up to this day done nothing for the public good or sufficiently efficacious to save the country; for the purpose of effecting this object, a company having duly reflected upon the divers means that might be employed, and under the impression that they have discovered the proper ones, propose to the public a subscription of $80,000 for the total payment of the work to be done, and which shall be completed at farthest within twelve days.

The $80,000 to be payable as follows:—

8 days after completion of the work,	- -	$20,000
60 " " "		40,000
90 " " "		20,000

All advances will be made by the company.

Materials necessary for the work will be received in subscription, and the president will sign an obligation of forfeiture in case of failure.

(Signed,) LAFON, *Engineer and President of the Company.*

NEW ORLEANS, May 20th, 1816."

"SATURDAY, MAY 25th, 1816.

"The river continues to fall, and the waters of the inundation to diminish. As many recommendations are offered to the police concerning the necessary and proper measures for avoiding the

consequent expectations, when the waters shall have retired, we announce with satisfaction, that according to the documents which we have procured, the fear of an epidemic appears to be absolutely chimerical. Here are the facts which we guarantee, and to which we invite the attention of the citizens, especially such as are from the north, because they are more exposed to the dangers of the climate, and consequently more liable to be struck down.

"Old authorities recount three inundations caused by crevasses at this same place. One occurred in 1785, and another in 1791. There was not a greater mortality upon these two years than others. Those who doubt may go and consult the mortuary register kept by our venerable pastor.

"A third inundation occurred in 1799. There died this year more or less; but not in consequence of the inundation. A vessel arrived from the north, where yellow fever had been committing severe ravages for a long time, which introduced into this city patients and the disease. This circumstance is well known to many respectable persons, and let their intelligence and information dispel all the apprehensions which have sprung out of the popular tales."

"Friday, May 31st, 1816.

"The river continues to fall—the waters of the inundation have retired—we are led to believe that on Sunday the city will be liberated, and that we shall be relieved from all fear. The openings made in the shell-bank which borders the Lake to a great extent, and which only gives vent to the waters of the crevasse, on the one side by the Fisherman's Bayou, and on the other by the outlet of the Bayou St. John, ought to be considered as the real cause of the diminution of the waters; for that which the crevasse lost in depth by the falling of the river, was nearly compensated by the successive enlargement of its outlet. Mr. Tanes, charged with the direction of the work to be done on the border of the Lake, expressed this idea more than eight days previous. He was convinced that the waters of the Lake were at least three feet below those of the inundation; if attention had been given to his first advice, it is probable that not a drop of water would have entered the city.

"Providence does not always protect foolish people—then let experience make us wise. It becomes a government, of even

very limited powers, to take such steps as will insure that such another calamity should never again befall the metropolis of the State. But if such narrow views and such silly conceits should continue to prevail, let the citizens, instructed by the experience of the past, not forget, under a similar misfortune, that the first thing to be done is, to open or clear out the issues which let off with such facility, the waters of the inundation."

On the 7th of June we find an editorial stating that the waters had retired from the city, and that M. C. Mariotini, would re-open his *circus*, and give the proceeds of the first evening to the poor sufferers by the inundation. Furthermore, that precaution had been taken to purify the ground, by sprinkling lime along the streets.

The ensuing summer was a remarkably healthy one.

A

LOCATIONS PROPOSED FOR AN EMBANKMENT FOR THE FUTURE PROTECTION OF THE CITIES.

A B C D—*Plan proposed by the Surveyors of the Second Municipality; length 4 miles; height of required Levee, 8 to 10 feet.**
E F G D—*Freeport and Bouligny Plan; 4½ miles; height of Levee required, 8 to 10 feet.**
H G D—*McDonogh's Plan, from Burthe's; 4½ miles; Levee 8 to 10 feet in height, in swamp.**
I K L—*Hampson's Plan, upper line of Carrollton; 2¼ miles; Levee 8 to 10 feet high in swamp.**
M N—*Forshey & Riddell's Plan, at Harlaem; 1 mile in length; 5 to 7 feet in height.†*

*Deep Cypress Swamp begins about one mile from the River and extends to the Ridge. †Open Commons, with hard turf bottom.

[Compiled and Drawn by C. G. FORSHEY, Civil Engineer.]

[Scale—One inch per mile—each mile square shown in Map.]

[Published in the Daily and Weekly "DELTA," July 1, 1860.]

REPORTS FROM LOUISIANA.

ARTICLE III.—A chapter of the hydrography of the Mississippi river.—By Caleb G. Forshay, A.. M, Civil Engineer.

Crevasse of 1849.

The year 1849 was remarkable for its great amount of rain, and for the long-continued high water in the Mississippi river. The consequences of these, and the terrible pestilence (cholera) which scourged the city of New Orleans and its vicinage, were disastrous in the last degree, and must be remembered as an epoch in our metropolitan history.

While the events of so remarkable a period are fresh in our recollection, they should be chronicled and published in some permanent form, in order that those who succeed us, may learn from our melancholy experience a lesson of prudence.

In this article I shall confine my notes to the hydrography of the year, to the crevasse, its causes and consequences.

About the 15th of October, A.D., 1848, the river was down very near at low water mark. Measurements made in front of my dwelling, in Carrollton, showed a fall of fifteen feet below the highest water mark known, (say April 1st, 1828,) for the past thirty years. This was the lowest for the year, but not the lowest known by about sixteen inches.

Early in November the river began to rise with great rapidity, and on the 1st of January reached a point only three feet below the highest mark, and on the 1st of February it was at the mark of 1844, and almost even with the levée summit, every where below Donaldsonville.

This was at the highest mark for twenty-one years, and very naturally excited much apprehension for the safety of the levées, and the lands by them protected. As the water continued stead-

ily, though slowly, to rise, all the corporations having charge of levées commenced raising small dikes of fresh earth on the summits of the old ones; and by constant vigilance these were maintained till the month of March. On the 12th day of March the highest mark of the year 1849 was reached,—a point just fifteen feet, at Carrollton, above the lowest of 1848, and eight inches above 1844.

Authorities differ very much about the relation of this mark to that of 1828, there being as far as I can find no accurate register kept, in or near New Orleans. Those who speak from the most careful observation, are of opinion that there is little or no difference. Mr. L. Bringier, Surveyor General, a good and reliable observer, is of this opinion; and Mr. Labarre, who has lived fifty-five years in one place on the bank of the river, a few miles above the city, says that in 1828 the water was two inches higher than in 1849. I place them at the same mark.

Many of the levées were entirely new, and nearly all had required heightening, so that the water was against the fresh earth. The waves produced by winds, and passing boats, made great havoc among the new levées; and soon the consequences began to appear. The first great crevasse was in the month of March, in the upper part of the parish of Point Coupé.

It was soon abandoned, and continued to run till the water fell within the banks in the latter part of August. Soon after a series of the most terrible crevasses occurred, in the parishes of West Baton Rouge and Ibberville. They defied all effort to stop them, and many miles of the best sugar planting region of Louisiana, were completely destroyed, for the season. These ravages of the levées were all on the right bank of the river. Several breaches occurred on the left bank, especially in the Parish of Ascension, but these were closed, by early and powerful efforts.

On the 7th day of April, the Crevasse took place, at Eugene Fortier's, 15 miles above the City, on the right bank of the river. The Levee was only about four feet high where it gave way; yet such was the inefficiency of the efforts made to close it, that three weeks elapsed before it was regarded as impracticable. At this time the breach had worn 300 feet in width. The water was discharged first directly into Lake Cataouatche, and thence over the large interior lakes and prairies. But from the Peninsular character of the country between the high grounds front-

ing on the Mississippi and the Bayou Lafourche, the waters accumulated upon the interior area to the depth of about four feet; and of consequence submerged the rear of all the plantations within its scope which were not protected by levées in the rear. The destruction proved to be immense, amounting, according to the calculation of some of the best informed planters, to about 10,000 hogsheads of sugar from the present crop; and killing the cane on all the submerged lands. At a distance of forty-five miles below New Orleans the water stood near three feet above the swamp level, against the rear levees of plantations, the water still turbid to a degree, though it had wandered through more than fifty miles of prairie and swamp, and was several weeks from the river. Such is the lightness of the sedimentary matter that long quiescence is necessary to its deposition.

The lands continued submerged until about the middle of September, to nearly the same depth, though the river had fallen three feet by the 25th of July. The widening and deepening of the crevasse, seemed to keep its capacity for discharge about the same notwithstanding the fall of the river. The area submerged by this crevasse I estimate at 850 square miles, or 544,000 acres, above the neck of the peninsula.

Two other crevasses occurred, discharging their waters for the time being into the same peninsula; but both were stopped in a few days. One of these occurred on the 8th of May, at the Powder Magazine. The other was at Tunisburg, and broke on the 19th, some four miles below the City. The first was closed by the persevering efforts of a yellow man named Fleming, using slave force only. Piles were driven with mauls in water two to four feet deep, and hay and begasse were employed to choke the current, till earth could be placed upon it and a dike raised. This appears to be a very successful mode, in shallow water, and a favorite one with the creoles, who are much accustomed to close breaches in the Levee.

Several small crevasses occurred in the same bend but were soon subjugated by prompt *measures.*

Sauvé Crevasse.

To comprehend properly the Sauvé Crevasse and its consequences, it is necessary to give to those who may not be inform-

ed, a description of the topography of the country about New Orleans, on the left bank of the river. (*See map* A.)

At a point about eighteen miles by the river, above the City of New Orleans, the ridge known as the Metarie Ridge, joins the high land, near the river bank. From that point it bears nearly due east, keeping mainly parallel to the general course of the river, passing in the rear of the city, and reaching the Bayou St. John, near the junction of this bayou with the old Canal Carondelet, about two miles from the river at the Place d'Armes. And if my judgment is not deceived in the geology of the region, the Bayou Gentilly, and the ridge it lies in, is but a continuation of the Metarie Ridge and Ba yu, whose geological age, like that of Gentilly, is far anterior to the Bayou St. John.* The ridge has an average width of half a mile, and a height about six feet above the level of the swamp and lake. The bayou with a deep abrupt channel thrids the ridge, passing in gradual curves from side to side. A dike is formed by this elevated ground, which places New Orleans and her neighbor corporations upon a peninsular basin, into any part of which a crevasse would discharge the water alike on the whole. The levée on the N. E. side of Canal Carondelet, and from the Old Basin to the ridge, limits the basin below, leaving only two channels of exit for the waters of the basin; namely the New Canal and Bayou St. John. Under all ordinary circumstances these are sufficient, but not equal to the demands created by a crevasse.

At a point one mile below the source of the Metarie Ridge, on the lands of Pierre Sauvé, Esq., the river makes a sudden bend to the South, and the full force of the river is received by a bank of rather feeble tenacity of material. The abrasion of currents and waves have cut away these banks, towards the low lands of the Swamp, until the height of the levée required, at high water, is about eight feet above the level of the road along its base. The law requiring each proprietor to construct the levée in front of his own lands is executed with very different

* The Bayou St. John seems to be an irruption through the Metarie Ridge, and of such recent date as to have as yet no high banks like the Metarie and other older bayous in the alluvial lands. Some high water or other cause seems to have produced the disruption, not long prior to the levéeing of the country. Since the levées control the river waters the interior bayous have little to do but drain the swamps, and the waters bear no deposit capable of producing banks.

degrees of rigor. Mr. Sauvé had built his levée far back, to be safe from the cavings of his bank, and the deposit from the river had filled up his batture, to near the top of his levée, giving it apparently great strength. But the land slope of the levée was so precipitous as to be dangerous, in my view, and as the result showed.

On the third day of May, about four o'clock in the afternoon, the levée gave way, near the upper line of Mr. Sauve's plantation, and in a few minutes, showed that ordinary means could not close the breach. Three hours afterwards the writer was on the ground, and inspected the crevasse. It was then thirty feet wide, and was pouring over with terrible velocity. The width of the batture from the breach in the levée was about 100 feet, and the water over it was from one foot to four feet deep: whilst the remains of a former levée extended nearly continuously to a point above the breach. It was my belief, expressed at the time, that a powerful effort, immediately exerted, might arrest it by a work along or near the old bed, before the waters should cut a channel across the batture. But this effort was not made judiciously.

Messrs Sauvé and Trudeau immediately notified the Mayor of New Orleans and the authorities of the different municipalities, of the accident, that they might, if they thought proper, render aid in averting a general inundation of the peninsula.

On the following morning the Mayor of the City and Mr. Dunbar, Surveyor of the second Municipality visited the grounds, and returned without determining on any measures. The Mayor did not fear an inundation of the City, and Mr. Dunbar thought the breach so insignificant that it would soon be closed by the planters, whose slaves were at work endeavoring to run a dike of pickets, begasse and sand bags along the old levée.

About the 8th, the water began to affect the rear of the City, and to alarm the Mayor and other functionaries of the several corporations, and Mr. Dunbar repaired to the crevasee, where two or three hundred hands, slave and white, were at work, rather inefficiently. Mr. McLoughlin, with his pile driving machines, had commenced a row of piles, of about 700 feet in length on the batture, and had pushed them too near the brink of the bank, where there was deep water. The engineer deem-

it better to continue this than lose time by commencing a new work, though he did not approve it. The result justified his fears; for after nine days assiduous labor, with as large a force as could be worked then, it was found impracticable to close the breach; although the rows of piles and the dikes of sand bags were brought within twenty feet of each other on the two sides. The closure, certainly the most difficult part of the work, was attempted in the deepest place and where the curve of the plan approached nearest to the bank. The hull of a ship (the Suviah) was freighted with ballast and scuttled in front of the small breach, with a hope of throwing the force of the waters on either side, against the dikes; but this proved a very bad move, for the currents cut round her stern with double force, and soon carried away the works against which she rested.

Mr. Dunbar requested to be recalled, and on the 17th day of May returned to the city, ostensibly to consult with the other surveyors. Meantime the breach widened, and the waters, in spite of all exertions, had reached the heart of the city. On the 15th, Phillippa street and Rampart were under water, and the utmost distress prevailed among the poor, who occupied the rear of the Second and upper part of the First Municipality. By a timely and well continued effort of the Surveyor of the First Municipality, the levée on the right or lower side of the old basin and Canal Carondelet was strengthened and maintained; and the whole of the city below it entirely protected from inundation. A similar effort to maintain the levée of the draining company, on the lower side of the new canal, was less successful. The inhabitants above it contended that they had a right to the servitude of drainage, and that this levée acted as a dam, to raise the waters upon them. The seventh ward of the Second Municipality, which suffered more than any other, cut away the works that arrested the waters, and the whole area below the canal filled up to its level with that above, or very nearly so.

It was left to the Bayou St. John and the new canal to discharge through the Metarie Ridge, the vast volume of water contained in the swamp reservoir. The Bayou St. John discharged about one-third, and the new canal two-thirds of the water flowing down to the shell road. A large portion of this road was under water, and in many places skiffs passed across

it with perfect facility. The water had a general depth of four to five feet over the low swamp. A large portion of the water coming through the crevasse was discharged through the various canals that are cut through the Metarie Ridge, on the plantations, above Carrollton. Some of these were cleaned out to facilitate the discharge. The attempt to cut new canals through the ridge was abandoned as too laborious and expensive, as their length would require to be half a mile, and their depth two to four feet, to be of much service.

On the 19th of the month I visited the crevasse and made a sketch and measurement of the works. The ship had forced the piles from either side of the open breach and drifted through, her bow sweeping round and lodging in the branches of a large live oak which stood the shock, and still held the vessel with stern against the batture much in the position which she occupied permanently, at least for months after the closing of the crevasse.

By direction of the authorities of the First and Second Municipalities, Captain Grant, of Grant's Pass, near Pascagoula, was placed in charge of the works, with plenary powers as to money, means and men. Public opinion was much divided as to this movement; many having confidence in the well known energies of Captain Grant, who had many years before, as a pile driver, gained some reputation for closing a crevasse; others protesting that Captain Grant did not profess to be an Engineer, or man of scientific skill, and that so momentous a work, involving property and life to such an amount demanded the best lights of both science and experience.

These were the wiser class. After ten days supervision of the enterprise, and unlimited means at his command, the attempt to close his works, by throwing fascines against his puny row of piles, proved the destruction of the whole. The raging waters now rushing out, ten to eighteen feet deep, swept away his slender lines. He abandoned the crevasse, and manfully confessed to the joint committee, his utter inability to accomplish the task assigned him. The water had steadily risen in the city, and reached its maximum on the 30th May, the day after Captain Grant's failure. Its boundry line was, in Carrollton up to Fourth street, above Canal Avenue, and thence along Third street to the Greenville line, where it came

up to near the Rail Road. Thence to the upper line of Bouligny, it kept about three squares from the Rail Road ; through Bouligny and Freeport, to the line of Lafayette, the rails were under water, six inches in the deepest part. Keeping in the rear of the Apollo street high grounds, it crossed Felicity road between Bacchus and Dryades street, and crossed Triton Walk at Phillippa, Poydras at Baronne street, and reached Canal street, between Carondelet and St. Charles. It came into the gutters on Dauphine down to St. Louis, and thence stretched diagonally to the old Basin, on St. Peter St. All the Cemeteries were deep under water, so that interments were made chiefly at Cypress Grove. About 220 inhabited squares were flooded, more than 2,000 tenements surrounded by water, and a population of near 12,000 souls, either driven from their homes or living an aquatic life of much privation and suffering. What an active benevolence, and the aid of municipal charity could do was done, to relieve the distressed. It is too late now to inquire whether a more judicious investment of authority and effort to close the crevasse, would not have rendered both nearly unnecessary. The loss to the city in various ways was incalculable ; and as yet nothing was done to remove the cause.

After a grave consultation of a few days, and the rejection of a hundred patent and unfailing modes of stopping the crevasse, the surveyors of the two municipalities were placed in charge, and given carte blanche, as to money, men and materials. Dunbar and Surgi commenced operations on the 3rd June, holding out the expectation only that they could diminish the amount of water discharged through the breach. But it was obvious (at least to the writer's eye) that they commenced the only adequate work yet attempted. And on the 20th of June, just forty-eight days after the crevasse occurred, they closed the breach, and effectually terminated the inundation.

On the 22nd the water was nearly gone from the city, and copious showers of rain washed off the terrible filth which for forty days, had stood stagnant over street, yard, and tenement. The pavements were much injured, the gutters full of mud, and the bridges swept away.

The cost of closing the crevasse was posted up at $98,000, hough only $20,000 were expended by Dunbar and Surgi,

after the 3rd June. It is probable that this would have covered the whole cost, had the authorities commenced where they ended, and where all such undertakings must end,—in giving implicit confidence to professional skill. We live at an age quite too enlightened to place reliance upon "*practical* men," so styled, whose practice is not guided by the best lights of science. This seemed to be the view taken by the four corporations lying above, which were called on to pay a share of the expenses. They all declined, saying that had they been consulted, possibly very different counsels might have prevailed.

What the entire cost, to the several cities, amounted to, no just estimate can be made. The Second Municipality made it a reason for assessing an additional tax of one per cent. for the next year, to raise a sum of about $400,000, for the reimbursement of actual extra expenditures on streets, wharves and crevasses.

The crevasse of 1849, with other calamities, will long be remembered by the inhabitants of New Orleans. The year opened in the midst of the cholera epidemic. This ended in February, but revived in March and April, and was still prevailing to some extent, till the city was flooded, so that from November 1848 to July 1849, the entire business year, strangers avoided us, and business was stagnant.

Physics of the Mississippi River.

The crevasses are so intimately connected with the general hydrography of the year, and the management of the river in relation to our great Delta, that I shall be excused for introducing here a chapter relating briefly to the subject.

The great height attained by the river waters, this year, and the number of breaches in the levée, have produced a pretty general distrust in the sufficiency of the levée system, as a permanent protection against inundation. Having given this subject and the general physics of the river much attention, for many years past, I have made an abstract of my observations, in tabular form, for publication. (*See plates accompanying.*)

Though I do not believe that sufficient data have yet been carefully obtained from observation and experiment for the

final adoption of any new system of treatment of the river, still I do not share in the distrust of the levée system; and for some reasons which I submit, for the consideration of men of knowledge.

It may be assumed, that

1. The channel of the river is made by the abrasive force of its waters.

2. That a less force would produce a smaller channel, and a greater force a larger channel.

1. Hence, a concentration of its waters would increase the capacity of the channel, and conversely, diffusion of its waters would permit it to fill, (partially,) by its own sediment.

2. Hence, levées do not raise, but lower the level of the waters.

This proof, *a priori*, would appear to need no illustration. But for the benefit of those who reason by facts, rather than by principles, and as matters interesting in the physical history of the river, I submit the following.

1. The river has never, within the memory of man, risen to such a height as to submerge *all* its shores, even where the waters spread laterally beyond the levées. The water-marks of 1828 and 1849 were at the same level, or within two inches of the same, in the vicinity of New Orleans. Several points within twenty miles, above and below, presented *alluvial banks higher than this water-mark.* At Rickerville and Soniat's Point, for instance. This is true for almost every alternate point, from Fort Jackson, sixty-five miles below the city, to the mouth of the Arkansas river, the upper limit of the levées.

It follows, hence, that the river has hitherto risen high enough to deposit those banks, and of course, higher than since the levées were constructed. But observation is not wanting in this regard.

2. Observations have been made upon the rise and fall of the river, at Natchez and Vidalia, for near forty years, commenced by Sir William Dunbar, continued by Gov. Winthrop Sargent, followed by Samuel Davis, an intelligent planter, up to 1840, and continued thence to 1848 by myself.

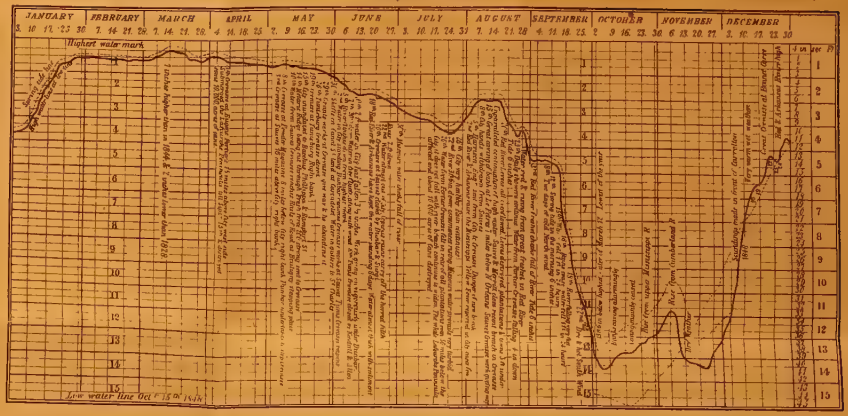
From 1817 to 1827, there were no levées of great extent along the Concordia shores. From 1827 to 1837, about 150

Register kept at Carrollton, La.

RISE AND FALL OF THE MISSISSIPPI RIVER.

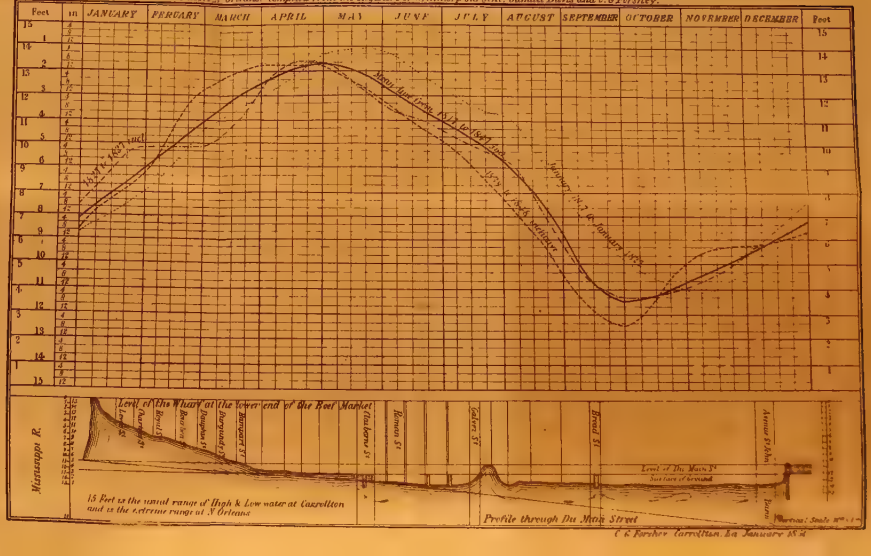
For the Year 1849.

by C. C. Pershey.



MEAN HEIGHT OF THE MISSISSIPPI RIVER FOR 30 YEARS IN GROUPS OF 10 YEARS

Also the Mean for the whole period. Reduced from the place of observation at Vidalia, opposite Natchez, Lat. 31° 34' North to Carrollton, La., 9 miles above N. Orleans. Compiled from the Register's of Winthorp Sargent, Samuel Davis and C. C. Pershey.


Feet
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
Mean Rise from 10 Yrs Period 1840 to 1849 inclusive
Mean Rise from 30 Yrs Period 1820 to 1849 inclusive
Mean Rise from 1840 to 1849 inclusive
Mean Rise from 1820 to 1849 inclusive
Mississippi R.
Level of the Wharf at the lower end of the Reef Market
Level of Du Main St
Surface of Ground
15 Feet is the annual range of High & Low water at Carrollton and is the extreme range at N. Orleans
Profile through Du Main Street
C. C. Pershey Carrollton, La January 1850

miles of levée were constructed; and from 1837 to 1847, those shores may be regarded as fully under the influence of levées.

By reference to the accompanying table, C, it will be found that the mean level of the river, for the first period, without levées, was higher than the second period while levées were being constructed, by six inches; and higher than the third period of ten years, under the full influence of levées, by nine inches.

It would be impossible to create outlets for the river, equal to those it had in a state of nature, without the destruction of all the levées, and opening all the channels since filled up; and when this should be accomplished, there would be no permanent reduction of the river's level.

The increased abrasive force, created by the concentration of the waters within levées, has worn away the banks somewhat,* and greatly deepened the channel of the river. Outlets would give temporary relief, till the channel should fill by its own sediments, and then it would rise as before.

The danger of weakening the power of the current against the bars of the passes, and thus obstructing the commerce within and without, should warn us against any hasty experiment in the form of outlets.

Were it possible to close the whole North-east Pass, (which nature seems inclined to do,) and Wilder's Bayou, or "the Jump," it is possible we might enable the river to push the bar into the deep water, just outside of the Rigolets, at the South-west Pass. This would, I am inclined to think, do more to relieve the country above, than all other works. Whether this would be possible, depends on an investigation not yet made. It is certainly not within the means or the duties of Louisiana. The mouth of the river belongs to the commerce of the valley and the commerce of the world.

* The abrasion caused by waves from steamboats, should be recollected by those who are seeking for a cause of crevasses. Lateral superficial abrasion has been chiefly from this source; and has reached the base of many of the old levées. Confining the water by levées, deepens without tending to widen the River Mississippi. Clearing away the forests, and lashing the banks with steamboat waves, have widened the channel.

B

TABLES *of Velocities of the Surface Current of the River, observed by myself at Vidalia, (opposite Natchez,) La., and at Carrollton.*

Carrollton Velocities.	No. Observations.	Stage of water in ft. below highest.	300	600	900	1200	1500	1800	2100	2350—yards from left bank.	
Aug. 14 to 17, 1849,	176	2.5	3.47	3.76	3.30	3.06	2.68	2.31	1.92	1.38—	miles per hour. Mean of 176 obs.—2.61 inches per hour.
" 26, "	23	3.5	3.52	3.20	3.00	2.76	2.40	2.26	1.75	1.26—	miles per hour.
Sept. 5, "	18	4.75	2.40	2.98	2.98	2.76	2.40	2.26	1.75	1.20	" "
" 17, "	27	6.5	2.76	2.98	3.10	2.80	2.50	2.30	1.50	1.00	" "
Oct. 5, "	9	13.33	1.92	1.92	1.74	1.57	1.40	1.23	1.00	.83	" "
Nov. 15, "	50	12.0	1.92	1.86	1.76	1.37	1.40	1.26	1.00	.80	" "
Dec. 6, "	53	9.33	2.40	2.76	2.13	2.00	1.80	1.60	1.49	1.00	" "
Mean of	182	8.25	2.50	2.62	2.45	2.24	1.98	1.81	1.42	1.00	" " 1.78 per hour.

Velocity at usual high water by 176 measurements = 2.61 miles per hour=3.82 feet per second.
" " low " 59 " = 1.45 " =2.11 " "
" " mean of 8.3in down 182 " = 1.78 " =2.60 " "
" mean height for 30 years, 7.222 ft. below highest=2.026 " =2.95 " "
" " " 1849, 4.250 " " =2.420 " =3.53 " "

C

Mean water level in Mississippi River, below March, of 1849, for 10 years, 1817 to 1827=6.823 feet.
" " " " " 1827 to 1837=7.288 "
" " " " " 1837 to 1847=7.557 "
" " " " " 1817 to 1847=7.222 "

D

Table of Capacities of River, Quantities Discharged. &c.

CARROLLTON, NINE MILES ABOVE N. O.

Sectional area of River at highest mark=168,260 square feet.
" " " lowest " =133,010 " "
" " mean for 1817 to 1847=151,288 " "
" the year 1849=158,390 " "

Mean depth of River at highest water, = 71.6 ft.
" " lowest, - - = 56.6 "
" " 8 ft. below highest= 63.6 "
" " for 1849, 4.25 ft. down= 67.4 "
" " for 30 years, - - = 64.4 " supposing the bottom to have remained unchanged.

Quantity of water discharged in 1849, deducting one-eighth for retardation below surface, } 13,338,040,000,000 cubic feet.

Mean quantity discharged per annum for 30 years, from 1817 to 1847, deducting one-eighth, } 12,250,000,000,000 " "

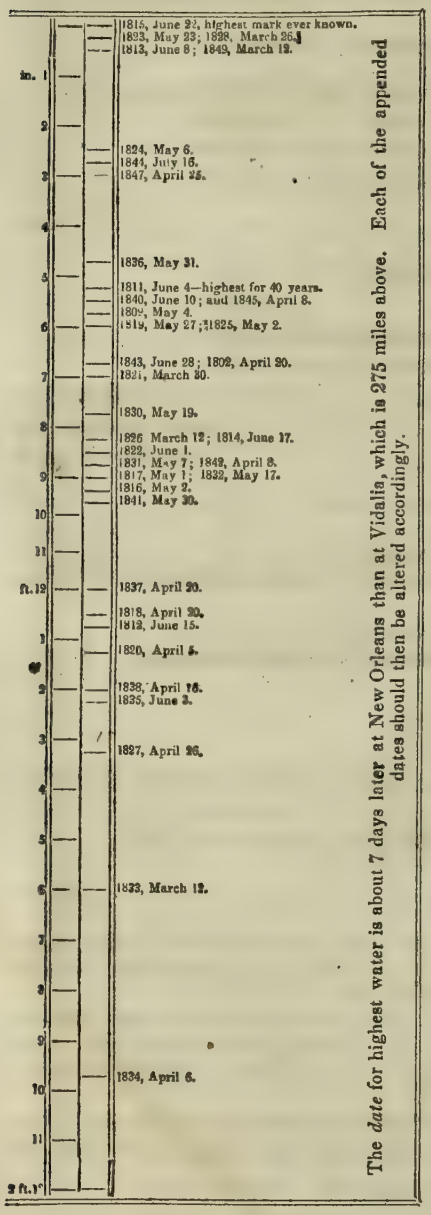
Rate of discharge per second of time at highest=644,435 cubic feet.
" " " " 8 ft. down=427,455 " "
" " " for 30 years 7.222 down=447,199 " "

NOTE.—The observations which relate to 30 years were made at Vidalia, opposite Natchez, near 300 miles above New Orleans, and have been reduced from a fall of 50 feet to a fall of 15 feet in the range of the river.

Observations of this nature are so rare that we are compelled to make all we can find available. Achafalaya is supposed to carry off a quantity of water about equal to what the Red River introduces, so the reduction to Carrollton of observations made at Vidalia, cannot be far wrong.

Of the 30 years Mr. Samuel Davis kept 23 years, and I continued them for 7 years. The measures of capacity were made at Cambrone, St. Carrollton, front of my residence.

TABLE *of High Water Mark, kept at Vidalia—published in the Concordia Intelligencer, August* 3, 1844—*reduced for the scale of New Orleans, and brought up to* 1850. *Registers of Governor Sargent, Samuel Davis, and C. G. Forshay.*



The *date* for highest water is about 7 days later at New Orleans than at Vidalia, which is 275 miles above. Each of the appended dates should then be altered accordingly.

NOTE.—Several years this highest mark did not reach this scale, and not within 2 feet of the highest mark.
Thus—1829, May 7, the water was 2 feet 1¼ inches down, and
1839, April 8, " 3 feet 4 inches, and
1846, June 1, " 3 feet 0½ inch.

NOTE 2.—As Red River empties below Vidalia, these reductions would be subject to its modifications, as to date and altitude. Still this is the nearest approximation in my reach.

CARROLLTON, LA., JANUARY 1, 1849.

C. G. FORSHAY.

A—Diagram and tables, showing the declivity of the Mississippi River for 400 miles from its mouth, by levels taken before the cut off at Racourci Bend was made. Drawn Nov. 4, 1848

Plate A. 1.

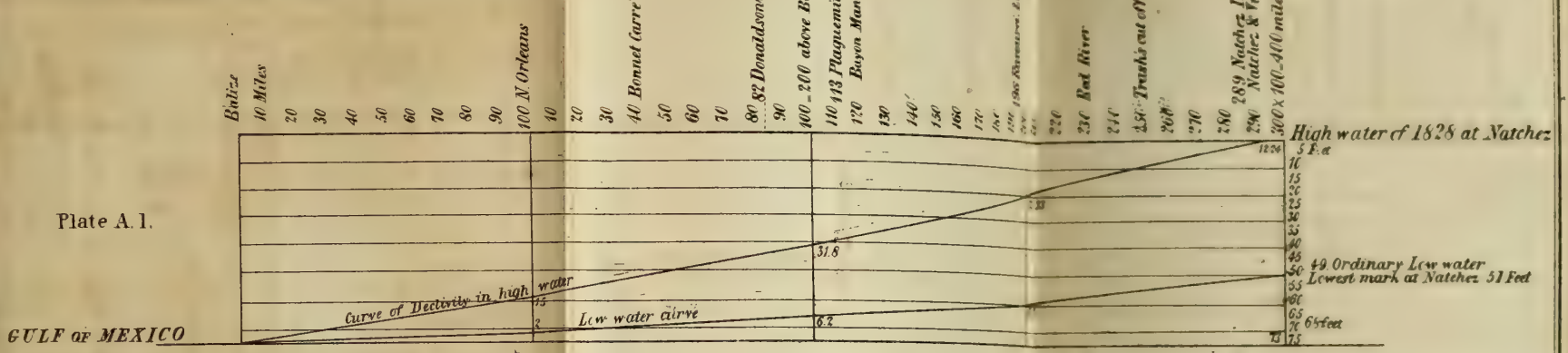
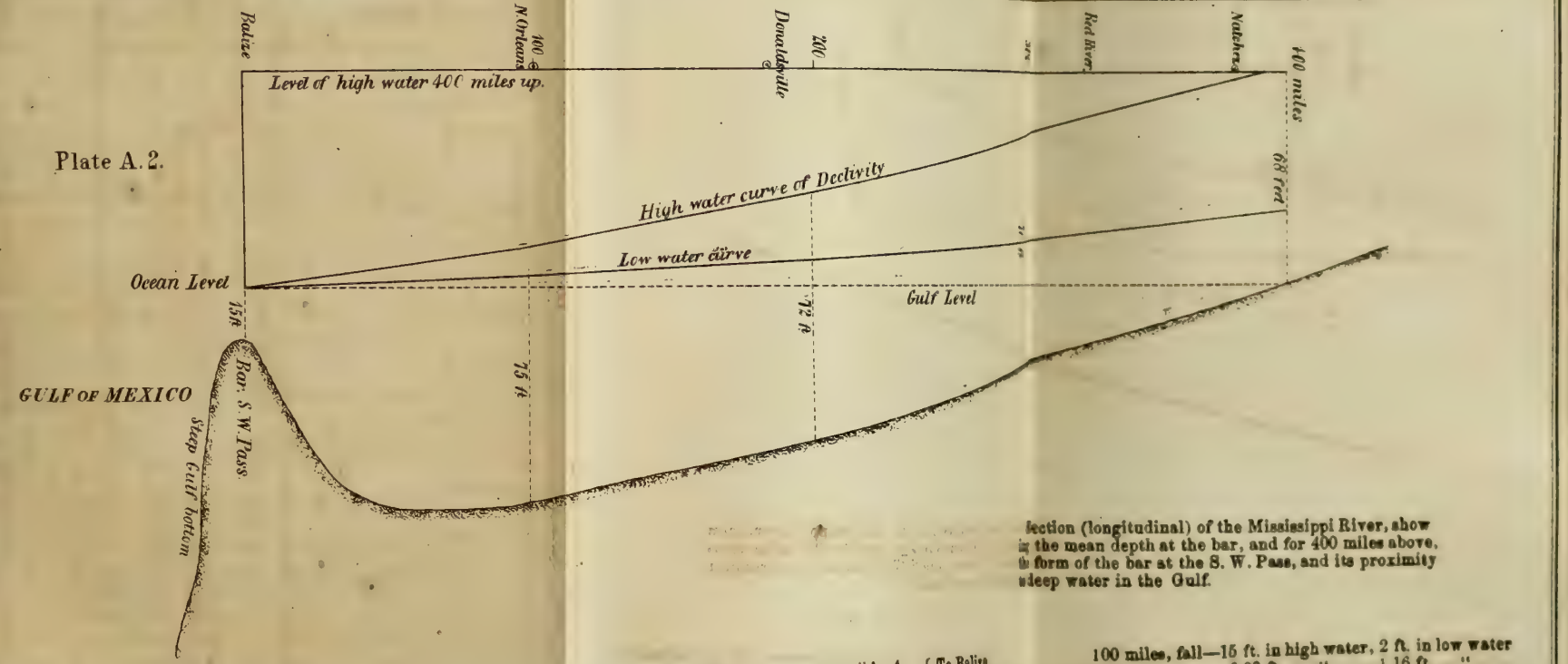


Plate A. 2.



Section (longitudinal) of the Mississippi River, showing the mean depth at the bar, and for 400 miles above, the form of the bar at the S. W. Pass, and its proximity to deep water in the Gulf.

A. 3. HIGH WATER RATES.

Balize to New Orleans	100 miles	=1.80 in per mile=15 ft.
N. Orleans to Hagan's pt.	=100 miles	=2.00 in per mile=16.66 ft.
Hagan's pt. to Rac. Bend	=100 miles	=2.30 in per mile=19.17 ft.
Racourci Bend, lower end, 10m above Natchez	=100 miles	=2.57 in per mile=21.42 ft.
Total distance=400 miles=2.167 means		=72.25 ft.

LOW WATER RATES, for same distances.

100 miles=	.24 in	=2 ft.	
100 " =	.50	=4.2	
100 " =	.83	=6.9	
100 " =	120	=8.0	
400	69	21.1 ft.	

A. 4.

From New Orleans		100 miles, fall—15 ft. in high water, 2 ft. in low water
To Balize		
" Bonnet Carre	40 " "	6.33 ft. " 1.16 ft. "
" Lafourche Bayou	82 " "	13.76 " 3.42 "
" Plaquemine B	113 " "	19.60 " 8.33 "
" Racourci Bend lower end of Cut Off	196 " "	87.49 " 13.86 "
" Mouth of Red R.	228 " "	43.96 " 16 76 "
" Trask's Bayou Cut Off	248 " "	45 19 " 18.50 "
" Natchez	290 " "	56.00 " 22.66 "

REPORTS FROM LOUISIANA.

ARTICLE IV.—Annual report of the New Orleans Board of Health.

[The following report, drawn up by the indefatigable Dr. Barton, one of the committee to whom the task was assigned, will doubtless be read with much interest. We venture to say that no other person in the city would have gone to the trouble of supplying the great amount of valuable statistics, to be found in the tables appended to this report, without the most liberal compensation. Yet here it is—gotten up at *immense labor*, and without any pecuniary remuneration whatever. We cannot expect a continuation of such favors without pay: no man can afford to do it. Dr. Barton seems to have a genius and fondness for those minute observations in meteorology and hygiene, which are so necessary to enable us to arrive at *scientific truth*. They require much time and care, but cannot be dispensed with. We consider the medical profession and the entire community, greatly indebted to Dr. Barton for the beautiful charts and valuable tables accompanying this report, and sincerely regret our inability to insert his large and beautiful chart, on account of the heavy expense.]

Section 8th of an act to establish a Board of Health in and for the Parish of New Orleans, approved 16th March, 1848, is as follows: "And be it further enacted, &c., That it shall be the duty of the Board of Health to make an annual report to the several councils, as to the health of the city for the preceding year, and to suggest means for improving the same."

In compliance with the duty imposed by the above act, the Board of Health of the city of New Orleans, respectfully report to the several councils:

Ist. The condition of the city as to health, during the year 1849.

IId. The suggestion of such means, as it deems advisable for improving the same.

1. The efforts of the Board have been incessant to procure a knowledge of the actual sanitary condition of the city, in the fulfilment of the first requisite, as without such knowledge, all attempts to improve it would be but groping in the dark; for that purpose they prepared and extensively circulated a set of by-laws, rules and regulations, with blanks for every purpose required by the Board; requesting physicians and others, whose duty it was made by law to prepare certificates to legalize burials, to give such information, as if complied with, would leave nothing wanting in this important department of their duty. The most urgent means have been used to obtain compliance, but they regret to say with unsatisfactory results, as will be seen hereafter.* If a city or country is ignorant of the diseases fatal to its population—if it does not know the age at death, sex, color, length of residence, occupation, and in what part of the city death took place; it must be ignorant of one of its most important duties; that which is dearest to every human being, *its sanitary condition*, the influence of the place on the lives of the inhabitants; the actual climate in which they live —the value of life there or "expectation of living," on what portion of the population it bears with greatest or least severity, or what part of the city requires ameliorations; in fact, whether that community is advancing or retrograding in these important particulars: and all laws intended to benefit the sanitary condition, without a previous knowledge of *what that sanitary condition is*, are deficient in the basis of all wise legislation and trifle with common sense. The Board excepts with pleasure from this implied censure, the cemetery reports emanating from the Charity Hospital; they have usually contained most of the information required. The deepest regret is felt at this omission, as we have few past records of what that situation has been. We are proceeding on ignorant of what are the actual truths. With a reputation abroad for perennial pestilence, with a boasting at home of unparalleled salubrity,

* Vide Table 1st D.

it is high time the truth should be known. With the recent correction of the census, and knowing the probable number of the dead, we have at last arrived at the important facts of the *ratio of mortality;* it is large enough to remove the scales from the eyes of error, to excite curiosity as to its cause, and to demand of all those who have the interest of the city at heart, or value their own lives and those of their families, efforts to remove them. Had the information sought for by the Board, been obtained some years back, the actual influence of this climate upon the health of each and every class of the community, natives and immigrants, would be now accurately known —those parts of the city most sickly would have been pointed out, the effect upon different classes of maladies originating here or imported would have been shown, and with equal and most gratifying truth, it may be said, in a great measure removed. Included in the information sought, were the facts intended to elucidate the curious and important investigation of the difference of the mortality and viability of whites, blacks and mulattoes, which probably can fairly be obtained only in this city; the result bearing upon the ultimate existence of the colored races in this country, of the possibility of ultimate amalgamation of the races, and will materially aid in settling these important questions in anthropology.

All other modes of estimating the prosperity of a community are deceptive. It is in vain to look at the increase of the exports and imports, its growth in area, its splendid architectural ornaments, even its increase of population, *all are illusory.* The true touchstone is its SANITARY CONDITION, the deaths to population, the average age at death, the real value or "expectation of life." For what is wealth without health or continuance of life to enjoy it? Immigration may fill up the gaps caused by death, a floating population may in a few months accomplish your principal commercial business, and your fine port may be but a depot for the exchange or barter of commodities for people living in different parts of the world, utterly indifferent to your interests. Such has been the history and such still is the condition of various marts of commerce in the eastern hemisphere.

We proceed to make the most of the data furnished, which have, nevertheless, great value.

It was also made the duty of the Board to keep a journal of the weather, with all the meteorological details required by our position; and such an one is furnished (*Table* 3.) The connection between mortality and meteorology is so intimate, that nowhere can they be independent of each other. Indeed, it may almost be laid down as an axiom, that climate is little more than the result of certain meteorological conditions; so, that by studying the latter, you can understand the former. We have here a peculiar climate, resulting from these conditions, influenced by a topographical position such as is not exhibited elsewhere in our country. These influences also bear upon a people, a large portion of whom are not natives of the soil, and are to receive their climatural impressions here after attaining their maturity elsewhere. We are not now to learn for the first time, the connection of health with this condition; man learned it as soon as he became exposed to a variable sky. The entire extent of that influence is yet to be shown, as science unfolds with her observing eye, the great arcana of that atmosphere in which we live, and move, and have our being. In a moist and variable climate like this, no one doubts the indespensable importance of watching and studying all its phases. To suppose that such meteorological variations occur without influencing the health of man, is really stretching credulity beyond the bounds of sense and experience. To be sure, we do not know the precise amount of heat and cold, moisture, dryness, ventilation or stagnation of air, nor of barometric pressure that produces disease, or what is necessary for the attainment and continuance of the highest health; nor do we know the precise amount of filth or impure air an individual may be exposed to and yet survive; yet we know enough to see the influence of their excess or deficiency. The precise problem of constitutional susceptibility or vital resistance to disease, is individual in each and every case; still, our ignorance of one or the other should not prevent us applying the great principles of salubrity under whose laws death is curtailed at one half, and, by statistical records, (in some countries,) of more than three-fourths of its victims: nay, that man under the guidance of these great laws, may approach, if not reach the primeval period once allotted to his race.

We present you a chart (*table 4th*) representing the meteorological and mortuary details, and a single *coup d'œil* will show you the bearing of one on the other. The upper part of the sheet, is the *climate of New Orleans:* the lower, the *result of the climatural influences*, with the addition of the consequences of impure air, engendered by filth and improper habits. It is mainly by these means, particularly in southern countries, that the great arcana of nature are to be understood, and climatural influences on man developed and corrected. It is to be borne in mind that meteorological changes do not immediately produce death; but that the consequences follow after a due allowance for the period of sickness. Examined with this understanding, the effect is sufficiently obvious. The scales on the left side will exhibit the elevation and depression of the instruments, showing the monthly extremes of heat, cold, moisture, dryness, the pressure of the atmosphere, the force of evaporation, and the fall of rain. The mortuary lines below show, by the scales, the weekly mortality; each division being equal to five deaths. There are several of these: that representing the general mortality, is exclusive of cholera, as not belonging essentially to the climate, and has its own special explanation; and also all cases of death from other causes than disease or climatural influences, as drowning, wounds, stillborn, &c. And, as the rise and fall of the river is supposed, in the opinion of many, to influence the health of the inhabitants, I have procured, from Professor Forshay, the beautiful diagram exhibiting the same, showing the period of inundation, the successive elevations and depressions, and the influence of the various streams upon it, which has been added to the chart, so that all might be embraced in the same *coup d'œil.* The crevasse, you will observe, occurred in the early part of May; in about —— days the water reached the rear of the city, rose as high as Carondelet street in June, and retired early in July.

The *Medical Constitution* of the year has been as peculiar as its meteorological. It has been in the midst of one of those great cycles of time which the recording hand of science has noted; in which great disturbances in both have been observed, with, doubtless, a marked bearing upon each other; giving rise to

one of those great epidemic principles (constituting, in this instance, CHOLERA) which, at nearly stated lustra, prevails over the entire globe; extending from the east to the west, with varying divergence, remaining at tolerably well established periods, and travelling at different velocities; with cholera, it has been calculated at about 17 miles per day. The birth of great precision in detail in regard to all these revolutions, (meteorological and mortuary,) is too recent to permit us to exercise that exactitude which science requires; nor is it necessary for our purpose. It has, nevertheless, been seen, that it has been uninfluenced by any obstacles presented by elevation or depression, mountain ranges or valleys, heat, cold, rivers, seas, or climates. The lower creation of animals of the field or the forests, the birds of the air, and the inhabitants of the great deep, have felt its all prevading influence. Nor has the vegetable creation escaped its wide spread desolation. All we can ascertain is, that like other phenomena, whether affecting man, or the great world in which we live, it follows certain definite, and, many of them ascertainable laws; as does the cause giving rise to influenza, small pox, also hurricanes, water spouts, thunder-storms, earthquakes.

With reference to the great epidemic principle giving rise to CHOLERA, whose devastations have been so severe throughout our country, it is some consolation to know (poor as that is) that it derived *no influence from our position.* Notwithstanding its originating in a latitude, climate, and on a great stream surrounded with swamps somewhat similar to our own, there are moral aspects, grades of civilization, and wide extension of comforts, that produce an immense bearing on disease, widely distinguishing our happy country from the down trodden millions of oppressed India; and the difference between that country and this, is almost as great as between the present and fifteenth century, when plagues so often ravaged the earth with a severity far exceeding that of later times. It is further observable, that there is scarcely a large city in the Union, where it has prevailed, that it has not been *more severe* than here, notwithstanding the peculiar character of our floating population. The littleness of man has been exhibited in puny efforts to arrest, by quarantine, the progress of a pestilence that travels

on the wings of the wind; but it has been found that the only stay to its devastation is in the rigid exercise of those rules intended for our preservation and benefit; and which, at the same time, rewards us for obedience to those great laws intended for our guidance. Medical science has done much for its relief. When left to itself, it is almost uniformaly fatal; but, with our present knowledge of its preventativeness, the scourge itself, to the prudent and temperate, (excepting in embarrassed constitutions,) is scarcely even to be dreaded. It is some consolation, then, in relation to this disease, which cometh and goeth under laws and conditions so little understood, that each individual carries his safeguard under his own control, in the correctness of his personal habits. The liability being individual, the municipal power can only aid by cleanliness and ventilation.

Accompanying the belief that, as it originated in a climate in many respects similar to our own, there was probably, one feature common to both in which they participated, that being the prevalence of great moisture, from similarity of topographical situation; and that, consequently, it may be expected to remain permanently among us. By reference to the Chart, it is gratifying to perceive, that this is a great mistake; and that *dryness*, instead of *moisture*, has been so remarkable, as to appear to act in the line of causation. We had, during the worst of its devastation, a prevalence of *dry fogs*, once noticed by Humboldt, in passing the Andes, and centuries ago, by others, as accompanying (and probably causing) epidemic influenza; (the uniform precusor of cholera.) These lines of aridity (force of evaporation and low hygrometer) and cholera, are marked on the chart, and it really seemed that the disease declined as the moisture increased, and the rain fell!*

The amount of mortality produced by it during the year, has been 3176, which has not been added to the general mortuary

* We confess our astonishment at this observation of Dr. Barton. It may be perfectly correct according to his instruments; but the fact is notorious that cholera broke out and raged here during an extraordinary *warm and damp spell of weather*. At least, so it appeared to common observers. The streets were as muddy as possible and the side walks, walls, &c., were reeking with moisture. Heavy *fogs* overhung the city till late in the mornings; and if they were *dry*, we shall have to correct our ideas of moisture and dryness; for we have been under the impression that *Mississippi fogs were generally very moist*.—Ed.

line on the chart, because really it has nothing to do with the climate, which that was intended to elucidate, any more than the drowned, still-born, &c., which have also been excluded from it; nor as having any bearing upon those sanitary ameliorations recommended in the second part of this Report.

It will be perceived, that the mortality from the class of FEVERS, the great outlet of human life in the South, is small, constituting about 14.58 per cent. of the entire mortality, of which, more than half (or 55. 30 pr. ct.) is from YELLOW FEVER, and is embraced with it, as they both essentially belong to the place, and differ but little. Whether we shall ever get rid of the latter, is a problem impossible to solve with the lights at present before the profession; *we don't know its cause; (causa sine qua non)* That all fevers, this included, will be more rare as the laws of general and personal hygiene are applied to communities and individuals, we know, from the results of actual experience, and, therefore, there is no doubt, as these improvements progress, yellow fever will, as already remarked by professional men, lose its individuality, and become blended with ordinary fevers; once very distinctly marked, now, many cases puzzle the most experienced in its diagnosis; formerly, clearly an acclimating fever, (probably the only acclimating fever known;) now, so indistinct are its features, often, that many of the profession believe it can be taken over and over again, and that even those "to the manor born" are subject to it. In Tropical countries, all unnacclimated persons are subject to it at levels below 2500 feet above the level of the sea; and particularly, in the cities. In the West Indies, where civilization and refinement has progressed with the advancement of the age, we believe it is rare out of the cities. In Mexico, on the contrary, in its semi-civilized state, where the grossest personal habits prevail with the mass, the residents of the *tierras frias y templadas* are constantly subject to it when they descend below the limits above indicated, into the *tierra caliente*, or warmer regions. With us, then, there is every hope that, with the progressive improvements which are in accordance with the enlightened period in which we live, and which, of course, the public will adopt as soon as they clearly perceive them, yellow fever will follow in the train of all the other sanitary ameliora-

tions. From the imperfect data which exist here, in relation to the occurrence of fevers, and indeed, all special diseases, in past years, we cannot arrive at any very positive results; but there is reason to believe, they have diminished in number, intensity, and mortality; most probably owing to the successive improvements in the city, and, particularly, to the clearing and draining in the rear. The line of mortality from these diseases is exhibited on the chart separately, as they particularly show the influence of climate.

The next class of diseases to which your attention is invited, is the PULMONARY; and here we have especially to lament that deficiency in the certificates, first noticed in relation to "*residence;*" many, doubtless, visiting this mild climate on account of its kindness to pulmonary invalids, and here falling victims to the disease already beyond the reach of art or climate, and adding to our mortality in that respect. The whole class amount to 876. Of these, CONSUMPTION embraces 592; leaving only 284 for all other pulmonary diseases! By the following table it will be seen, that notwithstanding the addition made to our mortality by emigrants and visiters with these diseases, yet we are more favored in these respects than any large city in this hemisphere.

	Death from Phthisis to Total Mortality.	Death from all Pulmonary diseases to Total Mortality.
Philadelphia,	14.84 pr. ct.	28.57 pr. ct.
New York,	17.50 "	28.08 "
Havana,	19.50 "	25.07 "
Boston,	15.13 "	23.97 "
Baltimore,	18.20 "	23.33 "
Charleston,	18.27 "	22.73 "
Mexico, (city,)	2.45 "	16.76 "
Norfolk,	11.01 "	12.78 "
New Orleans,	9.37 "	13.87 "

The above extraordinary results have been made from *official sources.* The Reporter took the years as he had access to them, mostly the year 1845; and from most of them he deducted the causes of death *not diseases,* before he made the ratios.

This most unexpected result shows how singularly this city is favored in these respects. A line, indicating the influence of

this climate upon these diseases, every week in the year, is marked on the Chart. This line conclusively shows, that the increased mortality is only apparent during those months in which the city is mostly visited by immigrants and strangers.

From this exhibit of the principal causes of mortality we proceed to refer you to the entire aggregate. It amounts to 9862; of whom, about 29 pr. ct. died in the various hospitals. (*See table* 1*st*, *G.*) From this, deducting 3176 for cholera, and 372 from causes of death other than *diseases*, the nett mortality amounts to 6314; being at a ratio of 1 in 16.67 or 5.99 pr. ct. The stationary population being estimated at 105,347; being an increase of 5.32 pr. ct., annually, over the population of 1847, when the census was taken. This is a very large mortality: of course, a very considerable portion of it being derived from that mass of floating population, not enumerated in the census, and *which should have been stated in the mortuary certificates, had they been made according to the request of the Board*, as this was the only mode of detecting this most important fact. To supply that deficiency, as much as possible, we have prepared a table exhibiting 1st, the number of burials at each of the cemeteries; showing upon what part of the population this mortality has been heaviest; 2d, the country from which each came or claim as birthplace; (this requires the explanation that the period of "residence" here is not stated, materially lessening its importance,) and 3d, the ages at death, which is most valuable, as evincing the influence of the climate at particular ages. (*See table* 1, *B.*, *C.*)

Finally, we present you in detail (*table 5th*) exhibiting every case of death that has occurred in this city during the year, classed according to the nature of the disease, sex, and color, in monthly parts. This instructive sheet will furnish you a better idea of the salubrity of the city during the period under consideration than all the speculations derived from partial information. It gives a full view of the influence of the climate, and indicates, at successive periods of the year, the special maladies that occurred, with the sex and color suffering from them, and enables us to compare one climate with another by the classification which is now generally adopted by the profession. All the important results to be derived from an examination of this table we have been compelled to defer, except the above.

At table 1, A., are the ages of the dead; and at G., the number that died at the hospitals, amounting to 2892.

2d. From this exhibit of the city mortality for the year, we proceed to the second part of our duty; in "suggesting means for improving the same." Great as that mortality unquestionably is, we entertain the gratifying conviction, that it can be in part remedied.

There are several causes for the insalubrity of the city, (independent of those of personal habits, in not adapting them to the demands of the climate, with which, however, this Board has nothing to do,) the principal of which are GREAT ELEVATION OF TEMPERATURE, VENTILATION, UNDUE MOISTURE, and FILTH.

In a climate where, for nine months in the year, we have an average temperature *in our dwellings*, of 72.81,° and *with* the least reflected temperature it is possible to obtain, circumstanced as the the city now is, of 80.40°; every mode by which we can procure protection from the direct and reflected rays of the sun, would add much to the comfort, and greatly to its salubrity. This is easily accomplished by planting trees throughout the streets of the city, as has been done in most of the Northern cities, where they require it less than here; furnishing shade and pure air during the day and absorbing noxious gasses during the night; and by authorizing the erection of verandahs or sheds, throughout the streets, and particularly on the levée, where is the greatest exposure of the unacclimated population; or, as in tropical countries, by making the streets very narrow. It is perfectly obvious the more we make a city approach the country of its vicinage, as to heat, ventilation, dryness and cleanliness, and all those conditions which conduce to purity of air, and of course salubrity, we shall in the same proportion, improve it. The relative salubrity of the country, in the neighborhood of the city is not recorded; there are no data. Probably there are few rural districts in the United States more healthy, which is a convincing fact that the climate is not injurious *per se*, but becomes so from superadded conditions; (we shall see what these conditions are.) There is now a probability that the facts necessary to establish the comparative salubrity of all sections of our country, will be

embraced in the decennial census of this year; in the meantime, as the position is an important one and conviction would greatly aid the argument, we present a table exhibiting such comparisons as we have at hand.

The average age at death in Mass., including Boston, 1842, to '48, was 31 years.

"	"	"	while in Boston, it was -	21.64
"	"	"	in the State of N. Y. in '47,	29.9
"	"	"	in city of N. Y., '38-42, & 47-'8	19.9
"	"	"	in England, - - - - -	29.64
"	"	"	in London, - - - - -	27

The detail of the Registrar General of England shows that, between the rural and town districts of England, there is a difference of 40 per cent. in favor of the former.

The deaths to population was			in London, - - -	1 in 39.
"	"	"	in the country, (Surrey)	1 in 55.
"	"	"	in Sweden, - - - -	1 in 44.
"	"	"	in towns, - - - - -	1 in 28.
"	"	"	in Belgium, (country) -	1 in 46.9
"	"	"	in " (towns,) -	1 in 36.9
"	"	"	in Austria, (country) -	1 in 30.
"	"	"	in Vienna, - - - - -	1 in 21.
"	"	"	in France, - - - - -	1 in 39.9
"	"	"	in Paris, - - - - -	1 in 33.

Fortunately for us here, our climate, as well as the character and necessities of our people, are alike averse to great density of population; it is impossible to know what is the ratio per house, as the *number of houses is unknown.*

It is known also that various parts of cities are more unhealthy than others, there being local conditions and influences affecting health and mortality in one part which are often absent in others. So sensible has the Board been of this fact, that it has made efforts to procure them through the mortuary certificates, but so far utterly ineffectually.

But of all the external causes affecting the salubrity of the city, probably *moisture* and *filth* are more instrumental than all others combined, and it is consolatory to know that these two great agencies are sufficiently under our control for all the purposes of utility. Hazardous as this assertion seems to be, we

proceed to demonstrate that it is not altogether so chimerical as it appears.

This liability to undue moisture arises from our being surrounded by swamps, large lakes and rivers in our neighborhood, but particularly the former, which doubtless furnishes nine-tenths. This moisture is indicated by the hygrometer, (as well as the rain guage,) and is exhibited on the chart, and is more particularly referred to in the Meteorological Table in the appendix. It is independent of rain, and is sometimes greatest in months when least falls.

It is demonstrated, as the result of experience, from what has not only taken place in the great Mississippi Valley, but also in the island of Cuba, in Egypt, in South America, and elsewhere, that in proportion as a country is cleared, so does it become dry; it is more exposed to the evaporating power of the sun's rays and influence of the winds. By draining and cultivation the lands *have risen* in the rear of the city at least ten inches,* and such, we are informed, is the experience of the river everywhere. But again, as the city limits extend these consequences are farther made obvious. A city, particularly if well paved and sewered, is much dryer than its neighborhood, unless there are blind alleys to interrupt ventilation: the reason of this is very obvious, for water falling on the impermeable roofs and streets is directly carried to the covered drains; it is no longer, on the surface, subject to be redissolved in the atmosphere; the moisture on the roofs and in the back-yards is soon evaporated, and the air is speedily dry and elastic again; such is the explanation of the process, and it accords with the facts. This city is but partially in this protected condition, (not having covered drains, and the wretched pavements and uncovered streets retaining, and constantly giving out a great deal of moisture,) yet from the experiment of our rain guage here, and of some twenty miles below, kept by Mr. Morgan, less rain, by from twelve to fifteen per cent., falls here than there, and less is retained; the air is probably drier (when ventilation is not obstructed) and comparative hygrometric experiments will ere long demonstrate the fact. The theory of an upward current,

* Bringier.

from the combustion of a large city being productive of that condition, resulting in rains, is hardly often applicable in a position where a stationary atmosphere (the second essential condition) is so very rarely present—caused, doubtless, by our vicinage to the sea, the alternations of land and water around us—but, above all, by the rapid current of our great river washing, with resistless impetuosity, the extensive base line of the city. Hence, then, it is palpaple, that by removing the forest growth of the neighborhood, accompanied by a perfect system of drainage, the city and neighborhood would be much drier. But there is another still more effectual, which carries with it the incalculable advantage of *removing all the filth of the city*, at the same time that it protects it from undue action of the sun's rays, and that is by a system of *sewerage*. The difference of level between Levée street, and the (late) swamp beyond Broad street, is about eleven feet, the basin and canals of the draining company are seven feet lower, making eighteen feet; or from Roman Street, two squares below Claiborne Street to the bottom of said basin, is seven feet; the distance in each case being about a mile, the consequence is that underground drainage could be made from about Levée Street, letting in the Mississippi River at ten to eleven feet below high water mark, by drains constantly open, which would produce a current to Roman Street, the distance of about a mile, more than twice as rapid as the Mississippi at high water, and from Roman Street to the basin of the draining company, more than three times as rapid, and of course three times as strong; a force amply sufficient to keep itself perfectly clear and remove all the filth and offal of the city. This will be made clear by reference to the diagram accompanying this, (*Table 2d,*) to which has been attached the level of the river, the streets, the swamp and lands referred to. Were more force wanting here, it might be obtained by deepening the basin, just as deepening the outlets at the Balize would, beside removing an obstruction to the rapid emptying of the river, increase the fall and at the same time, the velocity and force of the current, and aid materially in discharging the waters from above, and thus protect lower Louisiana. We had prepared another diagram of the rise and fall of the river during the last twenty years; but an absence of a few years

made a gap in our Journal, that prevented our using it, but we have been kindly furnished, by our friend Prof. Forshay, with a diagram derived from Journals kept by Messrs. Sargent, Davis, and himself, for three series of ten years each, making a consecutive series of thirty years, and reduced to the level of the river opposite this city. From that interesting diagram it is made evident that only during a little more than two months in the year, viz: from the first week in September to the third week in November, the water in the river is not more than five feet above low water mark, or in which there is not an ample supply of water at the levels referred to, for all the purposes contemplated or required, and during the two months in which the water in the river is too low, a stationary power could be used for the purpose.

We have not been able to procure an estimate of the expense of a few leading covered drains, by which these important results would be obtained; but it is not too much to say, that a perfect system of sewerage and drainage, embracing the city and neighborhood, would be cheap at any price; for they at once remove *all the known causes of disease* under the control of the public; both filth of every kind and almost every where, and undue moisture! The present system of police is a mere mockery and deception, leaving the public here, and those interested in our city abroad, under the impression that its salubrity is unimprovable.

The benefits to be derived from sewerage are so palpable from what has been said, and so clearly in accordance with all experience, that here it might safely be left; nevertheless, it has been so forcibly put in the following statement of the examination of the distinguished Dr. Southwood Smith before a Committee of the House of Commons of England, that we thought we could not do better than make a short extract from it. He "declares that in every district, in which fever returns frequently and prevails extensively, there is *uniformly bad sewerage*—a bad supply of water—a bad supply of scavengers and a consequent accumulation of filth; and I have observed this to be so uniformly and generally the case, that I have been accustomed to express the fact in this way. If you trace down the fever districts, on a map of the Commissioners of Sewers, you will find that wherever they have not been,

there fever is prevalent, and on the contrary, where they have been fever is comparatively absent." And, "again" he adds, "many days' experience convinces me that a very large proportion of these evils is capable of being removed, and that if proper attention were paid to sanitary measures, the mortality of those districts would be most materially diminished; perhaps in some places *one-third*, in others *one-half*"! If these remarks are applicable to the city of London, in latitude 51.½°, with its fine climate, where it is more than twice as salubrious as it is here, how much more so are they to this city, at lat. 30°.

The removal of street and back-yard filth, according to an ordinance of the city councils, and the strong and urgent recommendation and even entreaty of this Board, has been essayed in vain; in fact, the proper and effective cleansing of the city—its effectual drainage, so far as to ascertain how these conditions influence the health and well-being of the inhabitants, HAS NEVER YET BEEN TRIED! The offal from the houses, has not been removed from the streets at the periods directed by the Board; the filth scraped up into masses has been suffered to lie for days, often until washed into the gutters by rains, or scattered by carts and drays, the gutters left choaked up by filth.—the river water, and that from the Commercial Bank water works, (the latter bound by its charter to furnish it for the purpose,) have not been used but in the most partial manner, while by them the gutters could always be kept clean, and at small cost. It has been computed, with great force, that a rain of a few hours in London, will do the cleansing of a hundred thousand men in a week! Here we have abundance of water always at command, *merely at the expense of letting it through the levées*, and *opening* the *plugs* of the *hydrants;* yet this most essential cleansing and purifying duty is neglected! It is hardly credible, with a mortality exceeding any city in America, and mainly attributable to removable causes! The Board considers it its sacred duty to the public to speak plainly; it is nearly the only power it has; it can point to causes affecting the salubrity of the city, but it has no power to remove them; as at present constituted it is little more than a Board to notify the public of the advent and termination of epidemics, and to record such information as those who attend the dead please to make. These facts have been ably stated in the preceding an-

nual report of the Board, but no consecutive action has followed thereon; we repeat them, and warn our fellow citizens of the direful consequences that must continue to result if the whole wretched system (which would be injurious to health even at the latitude of 50°, much less at 30°, and on a soil robbed from the swamps) is not radically changed.

We have thus spoken freely of the climate, its influence on the inhabitants, and requirements necessary for its amelioration, and no labor has been spared that the details, so far as the Board could procure them, should be laid before those whose business it is to have them corrected,(with a conviction of more than twenty-five years standing, constantly confirmed by superadded facts and reflections,) that this city may be made all that the most sanguine desire it, not by supineness nor by boasting, but with the resolution of men who thoroughly understand what they have undertaken, and permit no trifling obstacle to retard them in their determined purpose, discarding for ever that fatal creed which palsies the hand of improvement and retains us in the statu quo of the bigoted Turk.

We have said above that the amelioration recommended should be accomplished at *any cost*. It belongs to your surveying department to calculate in figures the cost of digging and laying down in brick and mortar, the proper conduits for those poisons that now destroy life and injure the property and of course the prosperity of the place; commercial men know the injury they sustain by their goods and produce being stored or exposed in a moist atmosphere, for a longer or shorter period, and how much such a state of things injures the commercial mart abroad. Owners of real estate know or ought to know, the difference between a damp sickly city with a ratio of mortality for the last ten years of about one in twenty annually, or five per cent. and one where it ought not to be more than half that. There is no stimulus in the present constitution of society like self-interest; when properly enlightened it is true wisdom; to correct an error we must first see it, look it full in the face and not dodge it, or evade it by ingenious explanations. We have endeavored to point out facts, the true basis of all reasoning upon this subject, the pecuniary bearing resulting from it all ought to be acquainted with. There are some other effects of this condition more strictly appertaining to this Board's constitution, which

cannot be overlooked; they are such as the whole community is interested in; and first and foremost, if the sanitary condition is improved, in the additional years of "expectation of life," (to use the title of the statistician,) in a gain in that respect of five, ten, or twenty years, dependent somewhat upon each one obeying the laws of personal hygiene, while the public authority is taking care of those of general hygiene. Second is the cost of sickness; of this, so far as physicians' fees, nurses and medicines are concerned, we take no account, as it is the value of the time consumed, with his industry, skill, &c., this is not only lost to the individual but to the community, as this is but the aggregate of the individuals composing it. If five per cent. die annually, it is a very small calculation to allow two to be *constantly sick*, where the mortality is one; (which is the rule;) ten per cent., then, of active, enterprising, intelligent life, (such as we have here beyond all other populations on the face of the globe,) withdrawn constantly from productive business every year, is a serious loss to the community, which in its aggregate is perfectly startling! As, however, every community must be subject to sickness and death, it is hardly fair to debit the city with the whole as inevitable. Our own impression is that the mortality is at *least double* what it ought to be, were such improvements made as science, observation and experience point out, and humanity and interest demand. Hence, then, both directly and indirectly has a sickly country, retardations to its prosperity, wealth and influence, which are perfectly plain to all who will venture upon the investigation of what is considered the abstruse subject of vital statistics. It would be perfectly supererogatory to dwell upon the value of health to any place; it is admitted, without a dissenting voice, that no blessing can be enjoyed without it. If large cities have been denominated, "the graves of mankind," it has been with too much reason; both experience and calculation sanction it, but still they should not be unnecessarily so; it is perfectly apparent in this investigating age, what has made them so, and that it proceeds from causes that are in a great measure removable. Were there not great social and intellectual advantages from them (as well as pecuniary) men would not willingly, with a knowledge of these facts, thus multiply the sources of their own mortality, by congregating together.

It is well known that the population of many cities is maintained by immigration alone; but it is a poor compliment to an intelligent, rich and free people, that the love of thrift is stronger than all the numberless enjoyments which health produces.

In every view we can take of this subject, our interest warns us to take lessons from the past; neither wealth, rank, nor influence can escape the consequences. The removable causes of disease which afflict mainly the laboring population, hover like avenging angels over the heads of those in more elevated circumstances; besides the vast demands upon their pockets and sympathies, which no portion of the community is beyond the reach of. Such is the inevitable result in sickly cities; in larger spheres of action, the multiplication of the miserable in one class quickly shows its devastation in another. The French laid Egypt and Syria waste, the plague cut them off by regiments—the Egyptian Opthalmia blinded thousands all over Europe; the Russian army was completely paralysed in a late Turkish campaign by plague at Adrianople—the black death followed the victorious army of Cressy into England; and what army, however triumphant in one sense, but has been constantly haunted by the spectre disease, carrying off twenty victims to one by the sword; this painful truth has been but too recently enacted before our eyes in the brilliant but deadly campaign in Mexico; history is full of such examples, if man will only open his eyes, and apply them. If the cities of India had been well constructed, the country properly cultivated, and the habits of the people good, instead of being down trodden by the iron hand of oppression, and treated as beasts of the field, cholera would probably never have desolated the four quarters of the globe. The towering pride of the loftiest power that intellectual man has ever seen, even now totters to its fall from an oppression in Ireland, nay, under her very nose in "happy England" and India, the like of which defies the records of history, and the naked facts of which stagger the credulity of the present day. But it is thus, that an all seeing eye avenges oppression and punishes misconduct, and it is thus that he gives lessons to nations and warns them of the consequences of their misdeeds.

But there is another view of this subject which can neither be overlooked by the philanthropist, the patriot nor the Chris-

tian, and we trust it will not seem like "travelling out of the record," briefly to notice it. It is a curious and pregnant fact that where there is great insecurity of life, whether from sickness or other causes, there is more or less corruption in morals; the value of life is little estimated; recklessness assumes the place of prudence and carelessness usurps the seat of sense, not only with regard to this world but the other. This is not only the case with the soldier and the sailor, but in the most sickly regions of the earth, where the annual mortality is from 1 in 2, up to 1 in 10, 20, 30 and so on. The mortality of the most fatal battles, that fill the world with astonishment and produce *immortal renown* to the victor, is not so fatal as the *annual mortality* of some sickly city where but trifling efforts are made to prevent its recurrence. The blessings of our Divine religion are here felt in its benign influences; the purity, cleanliness, moderation, temperance and the great moral restrictions it inculcates, enforce observances highly conducive to health. It constitutes one of those remarkable coincidences of the moral and physical laws which science from time to time points out. Indeed, it may almost be laid down as an axiom, that the duration of life and the observances of the principles of morality and religion go hand in hand, and it is our belief that the history of the world will bear us out in these views; nor is it at all extraordinary, for it is only saying that the rules laid down for the regulation of life in scripture, are in accordance with the organic nature of man. The historian of the great plague in London bears testimony to the frightful immorality, hardness of heart and savage recklessness which disputed with piety, contrition and repentance, the dominion over men's minds. The history of other plagues and nations farther illustrate the position; so undeniable is it, and such is the beautiful harmony that sustains all the works of God. The average life in no country reaches three score years and ten, announced in scripture as the period for the duration of the life man. The average age at death in the northern cities, (doubtless owing in a great measure to the large mortality in infantile life,) is from nineteen years nine months, to twenty years three months, and in some of the cemeteries where destitute foreigners from the crowded parts of the city of Boston are buried, it is reduced to 13, 49-100. In the

south where it is so much more favorable to infantile life, the average age is much greater. In Charleston the average age at death is near thirty-six years. In Vera Cruz 24.6, and in the city of Mexico 27.7; while in the city of New Orleans the average age at death for the last year was 26.69, and in a series of years, the aggregate of all the cemeteries was 22.6. But to show the different influence of our climate upon the various classes of the population, the following table was constructed at great labor, (being all the data it was possible to procure.)

Cemetery.	Years Embraced.	Total Number of Deaths.	Ratio average age at death.	No. above 80.	No. above 100.	Gen'l average.
			y. m. d.			22.6.3
Catholic Cemetery.....	1841, '42, '43, '44,	442	26 3 14	*51	10	
Protestant do.....	1841, '2, '3, '4, '5, '6, '7, '8, '9,	1,445	24 9 14	†15	1	
Potters Field do.....	1841, '2, '3, '4, '5, '6,	8,566	23 10 4	‡33	9	
Cypress Grove do.....	1841, '2, '3, 4, '5, '6, '7, '8,	9 6	23			
St. Vincent de Paul, do.	1842, '3, '4, '5, '6,	1,152	20 5 14	§16	2	
St. Patrick's do.....	1841, '2, '3, '4, '5, 6, '7,	1,287	19 1			
Jews' do.....	1847, '8, '9,	70	14 1			

Of all countries on record, the rural parts of England and Massachusetts are probably most favored with respect to infantile life, and yet in Massachusetts 40 per cent., and in England 47 per cent., die while they are going through the process of development, and before they enter upon self-sustaining life, their 16th year. In New Orleans we have not the data to institute an exact comparison at these ages, but very near it; and we find that here only 36.98 per cent. die under 20! In this city, data of all kinds are very defective; we have, nevertheless, been able to construct a chart to show the real value of life here at successive ages, and at different periods of the year. It is too lengthy for this report. We may, however, state that it shows the extremely mild character of the climate at all periods of life under 20 and above 50, and during all months of the year, and that the chief fatality occurs from 20 to 40, (the ages of the immigrating population,) and the period the latter part of summer. Notwithstanding all this the following statement shows that we have a larger propor-

* 11.51. † 1.23. ‡ 00.38. § 1.38.

tionate population at the *productive age*, that is from 20 to 50, than the most favored parts of the world, viz.:

In every 10,000 in the United States there are -			3,708
"	"	"	Louisiana, 3,753
"	"	"	England and Wales, 4,028
While there are	"		New Orleans, 4,924

From all the information we can procure, it is satisfactorily demonstated that in countries where from climate, position and refinement a very small part of the population reach the age of their natural destiny, they approach it nearer in proportion as they obey laws which are adapted to the guidance of life: here, notwithstanding our deficiencies in many respects, sufficient is ascertained to hope for as near an approximation to the primeval ages as anywhere, and reference to the table on the preceding page, showing the number of the dead above 80 and 100 buried at the Catholic Cemetery, (the chief cemetery of the ancient Creole population of the city,) will satisfactorily prove the fact. That the rupture of the physical laws should carry punishment (disease) in its train is no more extraordinary than that the infraction of the moral laws should; the laws of man are often evaded, but with the physical and moral laws, the maker and executor being the same, they cannot be with impunity; so true then is it, that a prompt and exact obedience to these laws brings with it the blessings of health as well as all other blessings. This, then is an additional inducement for us to make all those ameliorations in the condition of the city which will tend to improve its health, and lengthen individual life, improve the standard of morals, add to our permanent population and so identify all with the country, as will give it the highest tone that society *requires* and *sustains*. Let us gather then the fruits of experience and learn wisdom from suffering, and like the fabled statue of antiquity with one face constantly on the past, we will have the other on that bright future when we shall be rewarded for efforts made to ameliorate the condition of our fellow-citizens.

(Signed,) E. H BARTON,
Y. R. LEMONIER,
T. G. BROWNING. } *Committee.*

TABLE 1st.

A.

Aggregate of all the Ages known of the Mortality of 1849.

	WHITE.		COLORED.		
	Male.	Female.	Male.	Female.	Total.
Under one month.....	300	179	74	65	618
" one year.....	248	225	84	57	614
" five years.....	367	336	98	102	903
" ten years.....	154	117	36	35	342
" twenty years...	255	139	78	58	530
" thirty years....	1352	435	126	78	1991
" forty years.....	1125	330	87	61	1603
" fifty years.....	561	159	54	59	833
" sixty years.....	222	84	28	48	382
" seventy years..	102	37	19	34	192
" eighty years...	38	31	13	19	101
" ninety years....	8	14	11	15	48
" 100 years.....	7	4	2	13	20
" 105 years.....			1		1
" 110 years.....				1	1
" 130 years.....				1	1
" Unknown.....	813	338	325	206	1682
Totals.....					9862

B.

COUNTRY.

Foreign.....	3569
United States.....	505
Louisiana.....	29
New Orleans.....	774
Unknown*.....	4985

* Including Negroes.

D.

UNKNOWN.

As to age.....	1682
" disease.....	645
" country.....	4985

" residence, either as to length, or what part of city, etc., so few as to be useless.

C.

BURIALS AT THE CEMETERIES.

Protestant.....	371
Catholic.....	985
Cypress Grove.....	182
Odd Fellows.....	5
St. Vincent de Paul.....	2438
St. Patrick's.....	1145
Potters Field.....	1451
Charity Hospital.....	2304
Lafayette.....	981

E.

AVERAGE AGE AT DEATH.

	White.	Col'd.
From Cholera.....	27.9	25.11
" Fevers.....	26.7	20.1
" Yellow Fever.....	27.7	

G.

NO. OF DEATHS IN HOSPITALS.

Charity Hospital.....	2745
Maison de Sante.....	45
Luzenburg Hospital.....	29
Franklin "	43
Circus St. "	30
	2892

F.

COUNTRY.

	Foreign.	United States.	Louisiana.	New Orleans.	Unknown.	Totals.
By Cholera....	1269	200	12	94	1609	3176
" Fevers.....	290	27	1	16	306	640
" Yel. Fever	580	39	0	2	171	783

METEOROLOGICAL REGISTER OF NEW ORLEANS FOR 1849.

BAROMETER.

1849.	Maximum.	Minimum.	Average.	Range.	Average of D. Range.
January	30.42 on 19th	29.85 on 8th	30.176	.57	.06.93
February	30.51 " 19th	29.70 " 11th	30.166	.81	.08.46
March	30.28 " 1st	29.72 " 21st	30.033	.50	.06.51
April	30.23 " 8th	29.77 " 28th	30.057	.46	.04.83
May	30.15 " 3d	29.74 " 16th	29.957	.41	.05.
June	30.15 " 19th	29.80 " 5th	30.001	.35	.04.68
July	30.16 " 27th	29.89 " 23d	30.042	.27	.03.96
August	30.14 " 13th	29.92 " 25th	30.047	.22	.04.25
September	30.17 " 9th	29.76 " 30th	30.019	.41	.05.50
October	30.35 " 30th	29.72 " 1st	30.050	.63	.06.
November	30.30 " 1st	29.83 " 30th	30.044	.47	.05.
December	30.35 " 31st	29.58 " 1st	30.098	.77	.08.74
Averages			30.057	.48	.05.82

THERMOMETER.

Maximum.	Minimum.	Average.	Range.	Average of D. Range.
79 on 13th	38 on 10th	58.97	41.	10.87
77 " 1st	28 " 19th	56.	49.	14.96
80 " 10th	47 " 22d	66.48	33.	10.27
78 " 7th	44 " 16th	67.03	34.	10.7
85 " 25th	64 " 11th	74.04	21.	9.51
88 " 8th	71 " 1st	79.33	17.	8.47
85 " 30th	73 " 12th	78.74	12.	5.88
87 4 days	74 2 days	80.96	13.	8.87
57 on 21st	65 on 8th	78.44	22.	9.33
83 " 1st	52 " 8th	66.68	31.	8.25
79 " 24th	46 " 26th	63.63	33.	11.13
78 " 21st	33 " 31st	57.33	45.	12.32
		68 96	29.25	9.99

HYGROMETER.

1849.	Maximum.	Minimum.	Average.	Range.	Average of D. Range.
January	73.60 on 15th	26.87 on 11th	52.40	46.73	8.29
February	67.18 " 2d	15. " 17th	45.83	52.18	6.90
March	72.02 " 21st	34.35 " 26th	60.52	37.67	4.51
April	70. " 6th	38.56 " 17th	59.37	31.44	3.47
May	75.65 " 4th	60.47 " 29th	68.19	15.18	4.15
June	78.56 " 9th	69.20 " 19th	74.47	9.36	2.62
July	80.72 " 25th	71.04 " 6th	75.53	9.68	2.72
August	81 80 " 18th	72.38 on 3 days	76.75	8.42	3.26
September	79.72 " 3d	58.25 " 8th	73.78	8.92	4.44
October	77.68 " 5th	49.99 " 8th	61.16	27.70	5.66
November	70.55 " 24th	41.14 " 26th	57.71	29.41	5.83
December	71.04 " 16th	21.36 " 31st	54.11	44.68	8.91
Averages			63.71	27.03	5.06

DRYING POWER OR FORCE OF EVAPORATION.

Maximum.	Minimum.	Average.	Range.	Number of Saturations.
29.36 on 20th	*0 on 2 days.	12.37	29.36	Twice.
30.18 " 27th	0 " 8th	9.70	30.18	Once.
15.67 " 20th	1.45 on 14th	9.81	14.22	Not once.
15.65 " 20th	0 on 5 days	9.82	30.18	5 times.
23.88 " 29th	0 " 6 "	6.59	23.88	6 "
15.31 " 19th	0 " 3 " †	5.35	15.31	3 "
14.84 " 29th	0 " 13 " ‡	3.26	14.84	16 "
13.30 " 14th	0 " 11 "	3.10	13.30	13 "
21.20 " 8th	0 " 9 "	6.53	21.20	11 "
22.11 " 11th	0 ten times.	6.55	22.11	10 "
25.75 " 27th	0 on 11 obs.	7.57	25.75	11 "
14.04 " 11th	0 on 15 "	5.15	14.04	15 "
		7.15	21.19	

* 0 Means saturation. † In June absent 7 days. ‡ In July 4 days.

	ASPECT OF SKY.				WINDS.											
	Number of days fair.	Do. Cloudy	Do. Rainy.		Number of days from North.	Do. N. E.	Do. E.	Do. S. E.	Do. S.	Do. S. W.	Do. W.	Do. N. W.	Do. Calm.		Quantity of rain in inches and 1000ths.	Degree of moisture on the hygrometric scale, (saturation being 1000;) average for each month.
January...	15	13.50	13.75		6.75	9	5.57	3	2.75	0	0.75	1.50	1		3.715	.802
February..	17.75	7.25	3		5.50	12.50	2.50	2.25	1.75	0	0	1.75	0.75		3.060	.730
March	16.25	12.50	1.75		1.50	8.50	3.50	5.75	9	1.50	0.25	0.50	0.25		1.718	.748
April.....	20.25	8.50	1.26		5.25	6.75	5	5	5.25	1	1	0.25	0.25		2.955	.774
May	22.25	5.25	3.50		4.25	4.50	5	3.50	11.25	0.50	0.75	0.75	1		4.270	.824
June.....	15	5.25	4		2	3	4	2	8	5	1	1			5.250	.853
July.....	10	10	8.75		2.25	3.75	6.75	4.25	8	0.75	1	0.25	2.50		14.741	.913
August....	21.25	3.50	5.75		4	1.75	2.25	0.50	11.75	2.25	5.75	0.25	2.50		4.473	.903
September	17.25	9.50	3.25		10.75	10	3.25	0.25	4.50	0	1.75	1	0.25		2.600	.846
October...	17	7.50	6		7.75	3.75	5.25	1.50	4.50	0.25	1.50	5.75	0.25		6.450	.819
November	19.75	7	3.25		8.50	4.75	6.25	3	4.50	0.50	0.25	1.75	0.25		3.945	.799
December.	10.75	16	4.25		7.50	2.50	4.50	0.75	7.25	0.50	0.50	4.75	1.50		2.365	.845
Totals .	202.50	96	58.50	357	66	70.75	54	31.75	76.50	12.25	14.50	19.50	10.50	355.75	55.442	821.33

NOTE.—The observations are taken four times a day—at day-break, 9 A. M., 3, and 9 P. M. Hygrometer at sun-rise, midday, and 9 P. M. Rain is noted,—marking when it began, ceased, and then measured to 1000th part of an inch by a scale such as is used at the Washington City Observatory.

Doctor Barton's Classification of the Deaths and Diseases in New Orleans, for the year 1849.

[Finding it extremely inconvenient to make room for the extensive and minute table of Dr. Barton on this subject, we have taken from it the following abstract, which furnishes the most important statistical points, and we think sufficient for all practical purposes. The classification is that which has been recommended by the American Medical Association. Dr. Barton is not responsible for the names given to diseases—they are such as appeared in the Cemetery Reports, and show plainly how defective is the common nomenclature of diseases. This table must have cost immense labor, and we regret that it was not printed in handsomer style for the New Orleans Board of Health and Medical Journal.

We shall proceed with our abstract, giving the classification of the diseases, number of deaths, and the relative proportion belonging to each sex and color.]

A Classified Statement of the Diseases and Deaths in New Orleans, according to sex and color, for 1849.

FIRST CLASS.

EPIDEMIC OR ZYMOTIC DISEASES.

Fever.	21	Fever, Scarlet, . .	22
" Adynamic, . .	2	" Mesenteric, . .	1
" Bilious, . . .	.lca3	" Puerperal, . .	6
" Malignant, . .	9	" Purulent, . . .	1
" Yellow, . . .	769	Cholera Morbus, . .	109
" Pernicious, . .	41	" Epidemic, .	3,176
" Typhoid, . . .	178	" Infantum, . . .	40
" Typhus, . .	164	Croup, ...	50
" Congestive, . .	78	Diarrhœa, . . .	188
" Remittent, . .	18	" Chronic, . . .	56
" Intermittent, . .	46	Dysentry, . . .	278
" Gastric, . .	2	" Chronic, . . .	47
" Ataxic, . . .	1	Erysipelas, . . .	13
" Nervous, . .	2	Hooping Cough, . .	27
" Cerebral, . . .	6	Measles, . . .	10
Chicken Pox, . . .	1	Small Pox, . . .	133
Syphilis, ...	3	Aphtha, . . .	1

SECOND CLASS.

SPORADIC DISEASES.

Abscess,	7	Sudden Death,	8
" Psoas,	1	Scurvy,	1
Cancer,	5	Anasarca,	4
" Nose,	1	Congestion,	1
Debility,	182	Scirrhus,	1
Hemorrhage,	11	Cachexia,	1
Gangrene,	12	Gout,	1
Dropsy,	60	Gangrene of Scrotum,	1
Scrofula,	10	" Of Eye,	1

THIRD CLASS.

DISEASES OF THE NERVOUS SYSTEM.

Anemia,	1	Meningitis,	65
Apoplexy,	101	Tetanus,	59
Arachnitis,	2	Trismus Nascentium,	172
Congestion of Brain,	117	Insanity,	1
Cerebritis,	97	Paraplegia, Paralysis,	7
Convulsions, Fits, &c.,	310	Phrenitis,	5
Cramps,	10	Encephalitis,	15
Delirium Tremens,	64	Hemiplegia,	1
Eclampsia,	4	Intemperance,	19
Epilepsy,	10	Asphyxia,	2
Gastro Encephalitis,	5	Adynamia,	1
Hydrocephalus,	23	Disease of Brain,	4
Hysteria,	1	Softening of Brain,	7
Masturbation,	1	Syncope,	1

FOURTH CLASS.

DISEASES OF ORGANS OF RESPIRATION.

Angina Maligna,	6	Pleuro-pneumonia,	5
Consumption,	592	Broncho-pneumonia,	1
Pneumonia,	75	Hæmoptysis,	7
" Typhoides,	21	Pleuritis,	21
" Bilious.	1	Bronchitis,	24
Catarrh,	34	Lungs, abscess of,	1
" Pulmonary	10	" Gangrene of,	3
Congestion & Apoplexy of Lungs,	10	" Œdema of	1
		" Cancer of,	1

Hydrothorax,	10	Lungs, Paralysis of,	1
Laryngitis,	19	Tonsilitis,	1
Angina Tonsilaris,	1	Sunstroke,	20
Cynanche Maligna,	1	Asthma,	3

FIFTH CLASS.

ORGANS OF CIRCULATION.

Heart, Disease of,	38	" Hypertrophy of,	14
" Aneurism of,	4	Carditis,	2
" Dropsy of	3	Endo-Carditis,	5
" Ossification of,	2	Pericarditis,	10
Aneurism,	7		

SIXTH CLASS

DISEASES OF THE DIGESTIVE ORGANS.

Ascites,	18	Dyspepsia,	1
Dentition,	102	Ulceration of Intestines,	3
Gastritis,	15	Marasmus,	65
" Chronic,	7	Hepatitis,	27
Gastro-Duodenitis,	6	" Chronic,	18
Gastro-Enteritis,	107	Worms,	18
" Chronic,	3	Peritonitis,	8
Gastro-Entero-Colitis,	4	Obstruction of Bowels,	3
Gastro-Entero-Hepatitis, Chron.,	1	Hernia Strangulated,	2
		Typhus Abdominalis,	5
Enteritis,	173	Hematemesis,	2
" Chronic,	24	Hemorrhage of Bowels,	2
Entero-Colitis,	8	Scirrhus of Pylorus,	1
Gastro-Hepatitis,	2	Hepatic Abscess,	2
Colitis, Chronic,	3	Scirrhus of Liver,	1
Cancer of Stomach,	5	Rupture of Liver,	1
Indigestion,	4	Jaundice,	2
Colic,	5		

SEVENTH CLASS.

DISEASES OF URINARY ORGANS.

Disease of Kidneys,	2	Cystitis,	7
Stricture of Urethra,	2	Recto-Vaginal Cancer,	1

EIGHTH CLASS.

DISEASES OF ORGANS OF GENERATION.

Accouchment,	9	Metritis,	5

Premature Birth,	7	Cancer of Uterus,	5
Abortion,	2	Uterine Hermorrhage,	1
Suppression of Menses,	1		

NINTH CLASS.

DISEASES OF THE ORGANS OF LOCOMOTION.

Rheumatism,	4	Coxalgia,	1
" Chronic,	1	Spinal Marrow, disease of,	1
Myelitis,	2		

TENTH CLASS.

DISEASES OF THE INTEGUMENTORY SYSTEM.

Leg, ulcer of,	1	Purpur. Hemorrhag.	2

ELEVENTH CLASS.

OLD AGE.

Old Age.	54

TWELFTH CLASS.

EXTERNAL CAUSES.

Brain, Concussion of,	2	Scull, fracture of,	9
Spine, Injury of,	4	Neck, fracture of,	2
Breast, wound of,	2	Clavicle, fracture of,	1
Heart, wound of,	3	Arm, fracture of,	4
Shot wound,	4	Ribs, fracture of,	2
Penetrating wound,	13	Leg, fracture of,	9
Contusion,	2	Scald, burn,	30
" by boat Louisiana,	43	Still-born,	291
Poisoned,	5	Suffocation,	5
Suicide,	4	Strangulation,	4
Accidental,	17	Sex and disease unknown,	4
Drowned,	92	Uncertain,	645
Head, injury of,	4		
		Grand Total,	9862

From this grand total we shall make up the following statistics:

SEX AND COLOR.

White Males,	5546	
" Females,	2428	—6974
Colored Males,	1036	
" Females,	852	—1888
Grand Total,		9862

MONTHLY MORTALITY.

January,	Total,	1182
February,	"	601
March,	"	1395
April,	"	1007
May,	"	998
June.	"	807
July,	"	435
August,	"	485
September,	"	666
October,	"	911
November,	"	712
December,	"	630

REPORTS FROM LOUSIANA.

ARTICLE V.—Special report on the fevers of New Orleans—particularly the yellow fever of 1849.—By the Editor.

The fevers of New Orleans form the most interesting portion of its medical history. The other diseases and injuries to which we are liable afflict our population pretty much as they do mankind generally; but, fortunately for our race, not many places can share with us the peculiarities of our fevers. For half a century past the names *New Orleans* and *yellow fever* have been so intimately associated as to be considered almost synonimous. New Orleans is famed for its geographical position, its vast resources and its commercial importance—its glorious achievement in arms, its liberality, its benevolence, its public spirit, and its extravagance. Its vices, too, have been trumpeted to the world without extenuation; but in none of these particulars has it gained more notoriety than for the *terrific pestilence* which it almost annually engenders within its bosom, claiming its victims from every quarter of the world which contributes to its populative. Who shall define the limits of that circle beyond which no aching heart can be found to sigh for some lost relative or friend, who here came to an untimely end? Wherever the products of this fertile valley are wafted by the sails of commerce—in every land whose children have been led to our shores in pursuit of wealth, may be found some who have suffered, directly or indirectly, from the yellow fever of New Orleans. The beautiful tablets in our cemeteries contain the brief records of hundreds; whilst thousands have sunk "unhonored and unknown," having received the last offices of humanity from the hands of strangers.

From the time we first settled in this city, (December 1841,)

we have made *its fevers* our special study. We had previously practised in the interior of the country more than ten years, and therefore feel in some measure qualified to make a comparison. We had encountered the different varieties and grades of intermittent, remittent bilious, congestive and typhoid fevers; together with dysentery, which we believe to be one of the forms of endemic fever. We had seen high grades of bilious fever terminate with yellowness of the skin, and occasionally with hemorrhage from the nose, gums and bowels; but we had never encountered what was admitted to be *yellow fever.* This was still reserved for our observation; and on coming to New Orleans we resolved to brave all its dangers, and to study it with all the care and impartiality we could summon to the task. In accordance with public opinion, both professional and otherwise, we expected to find in yellow fever, a disease entirely separate and distinct from the endemic bilious fevers of the South—a sort of *epidemic affection* in the same category with scarletina, measles and hooping cough. The other forms of fever prevalent here had attracted but little attention; nor had any person, to our knowledge, been to the trouble to examine carefully the relationship existing between them and yellow fever. We were aware that some of the ablest and most experienced writers on yellow fever, who had witnessed it in Philadelphia, New York, the West Indies, Spain and other parts of the world, had proclaimed the opinion, and supported it by facts and strong arguments, that this disease was nothing but *a malignant bilious or malarious fever;* nevertheless, we found the belief generally prevailing here that it was altogether a different thing—a disease *sui generis.* After having devoted to the subject eight years of patient and careful investigation, in a field ample, rich and abounding in facts—as free as possible from the shackles of authority, and having no other object in view than the discovery of *truth,* we have been brought to conclusions which we think are correct, and shall therefore not hesitate to express them.

On coming to New Orleans we could find but little that had been written about the fevers prevalent here. Since that time we have had the good fortune to discover some valuable reports on the epidemics of 1817, 1819, 1822 and subsequently, which have long been lost to the profession, but which we intend to revive at an early day, in a contemplated history of yellow fever in the valley of the Mississippi.

Since the establishment of the New Orleans Medical Journal, in 1844, we have contributed to its pages, rude, though faithful accounts of the fevers which have prevailed here from year to year. The inquiring reader who may be in the least startled at the results of our experience, about to be briefly set forth, may find in that work some of the facts which form their basis.

In New Orleans we have met with all the forms of endemic fever which were familiar to us in the country, (West Tennessee, Mississippi and Madison Parish, La.,) with the addition of yellow fever and ship fever or genuine typhus. We have found those common to the city and country to prevail at the same season and in a similar manner, excepting that we met with a more rapid and malignant congestive fever in the country than in the city, and the bilious remittents of the country retain their character throughout, more than they do in the city. Here, in the summer and autumn, they have a decided tendency to *crisis* by *hemorrhage*. This makes *yellow fever*—it forms the true characteristic difference between the high grades of summer and autumnal fever in the city and country, and *must depend on locality and attendant circumstances*. We have intermittent, remittent and continued fevers, alternating in type and running into each other, just as they do in the country. Intermittent fever prevails here throughout the year as it does in the country. During the healthiest years it predominates over all other types ; but during the sicklier years, in the country, it runs into remittent, bilious and congestive, whilst in the city it runs into yellow fever.

Dr. Harrison testifies that he had often observed malignant intermittents immediately to precede the outbreaks of yellow fever epidemics.

The New Orleans Charity Hospital is probably the most extensive fever hospital in the world. Let us see how far the statistics of disease at that institution will sustain our observations. It appears from the records, that in a period of *nine years*, from the 1st January, 1841, to 1st January, 1850, there were admitted into this hospital 73,216 patients ; of which number there were admitted for *all the different forms of fever*, 33,381, (and among these last,) for *intermittent fevers*, 17,217.

It would thus appear that nearly one-half of all the patients admitted into this hospital were for the different forms or types of *fever*—and that *more than half of these were intermittents.*

It should be mentioned that this vast number of patients in-

cludes a Lunatic Asylum, having from sixty to ninety inmates, up to June 1848, when it was removed to Jackson; that the large number of fever patients includes many that were imported by sea, and brought from the neighboring countries; and that the intermittents include the different species known as simple malignant, pernicious and congestive. If we take into consideration that the intermittents are mostly our own, *i. e.* they originate in the city and surrounding country, whilst the continued fevers are mostly imported, the preponderance of the former will be still more striking. Let it not be forgotten too, that during the time specified there was but one single year, (1845,) in which our city was exempt from yellow fever.

The following statement will show the prevalence of intermittent fevers at the different seasons of the year, for the time specifie

Int. Fever.	Spring.	Summer.	Auutmn.	Winter.	All Fevers.	Yellow Fever.
1841	112	403	177	92	1991	severe.
1842	114	453	394	135	1758	little.
1843	85	208	413	137	2222	severe.
1844	117	469	732	231	2207	little.
1845	180	353	664	206	1763	none.
1846	236	569	1045	218	2603	little.
1847	391	508	691	602	6901	severe.
1848	282	689	874	535	6361	moderate.
1849	420	1701	3738	1275	7575	do.
Total	2443	5353	7728	2331	3381	

It will thus appear that intermittent fever prevails here all the year round; gradually increasing from the winter up to the autumn, when it begins to decline. It will be seen, however, that there is considerable variation in the amount, as well in the different seasons as in different years. The proportion is greater in the healthy years; but intermittents are never entirely absent, even when yellow fever is raging. During the nine years specified, on selecting the month in which yellow fever was worst, we found the following relative proportion of intermittent fever at the Charity Hospital:

1841,	September—Yellow Fever	682.	Intermittent	18
1842,	"	"	247	"	144
1843,	"	"	365	"	128

1841,	"	"	68	"	255
1845,	"	"	00	"	279
1846,	October.	"	83	"	376
1847,	August,	"	1611	"	74
1848,	September,	"	597	"	299
1849,	October,	"	520	"	720
			4133		2293

At the very same time we also find more or less cases marked remittent and bilious fever. Cases are seen every sickly year, commencing as intermittent or mild remittent, and wanting those strongly marked diagnostic symptoms which have been said to distinguish yellow fever; yet which, if neglected or mal-treated, terminate in *hemorrhage* and *black vomit.* In these cases, the advocates of the *specific* character of yellow fever contend that the patients contract a *new and different disease;* but we think improperly. We believe it is all the *same disease, differing only in grade and stage.* The attack was of its mildest form, and if promply and properly treated it could have readily been cured in *that form*, just as it is done in the country; but if neglected or mal-treated it runs into the hemorrhagic stage.

This brings us to the consideration of the distinguishing feature of the summer and autumnal fevers of this locality. A vast majority of cases in their mild forms, and the early stages of the more grave, are just such as are seen all over the southern country. The more malignant forms, and the advanced stages of the mild have a decided tendency to terminate by hemorrhage. This makes what is called *yellow fever*, and is the main feature that distinguishes it from the endemic fevers of the country. Physicians may say what they please about being able to distinguish a case of yellow fever as soon as they examine it: we don't believe it possible, according to their ideas. Rarely does a summer pass in which we do not hear of some intelligent and experienced practitioner being perfectly astonished at seeing what he had pronounced a case of *intermittent* or *remittent bilious fever*, terminate in black vomit or other hemorrhage. Now, what causes this tendency to hemorrhage in the summer and autumnal fevers of New Orleans, and occasionally in other southern localities we do not pretend to say, for we do not know; but that it depends on *something connected with the locality* is beyond a doubt.

Seeing then, that all the forms of idiopathic fever met with at this locality *prevail together* and are frequently seen to *interchange, or run into each other*, we are led irresistably to the conclusion that they are merely *modifications of disease springing from one and essentially the same general remote cause.* All authors agree that the Intermittent and remittent bilious fevers of the country, in the summer and early autumn, spring from the same remote cause, and consequently are but varieties and grades of the same disease. Now, we contend that the yellow fever of New Orleans holds the same relation to its intermittents, that the severe bilious fever of the country does to the intermittents there—they are therefore in the same catagory. We do not assert, with Rush and others, that yellow fever is nothing but *a high grade of bilious fever;* for we admit that the latter is sometimes the most malignant of the two, without displaying the characteristic features of the former. Our position is, that *yellow fever is only one of the forms of endemic fever*, (malarious, if you will,) *which derives its characteristic features from the locality and attendant circumstances where it prevails.* Admitting that all these fevers proceed from remote causes closely allied in their essential nature, though not precisely identical, and that the milder forms and the early stages of the more grave are very much alike, we are still presented with the remarkable difference in their mode of fatal termination. The fevers of the country cause death by *inflammation of the brain* or of the *gastro-intestinal canal*, or by that strange lesion of the nervous system which is called *congestion*—the fevers of the city produce such an alteration of the blood and the solids as leads to fatal *hemorrhage* and *jaundice.*

We might go still farther and say that *the very same remedies* which have been found so beneficial in the fevers of the country, are *equally applicable to the fevers of the city*, though they require to be differently administered. We have found them so; but as there exists much difference of opinion on this point, we will reserve it for more extended experience.

We do not believe that yellow fever can properly be classed amongst *epidemics*, if there be any strict and real distinction in the meaning of the terms *epidemic* and *endemic.* Epidemical diseases, such as measles, scarletina, pertussis, influenza, and cholera may prevail in any region or climate; but endemical diseases are confined to the localities where they habitually pre-

vail, and depend upon circumscribed influences. Under this view of the subject yellow fever is just as much an *endemic* disease in New Orleans and other places where it prevails, as remittent bilious fever is in the country. We have no other objection to the common acceptation to the term *epidemic*, as applied to express *the extent* to which any disease may prevail, than that it may be giving too much latitude to the definition of our nomenclature. In our allusion to yellow fever, we shall continue to use the term as it is commonly understood.

After seeing the statistical *facts* which have been presented, writers should not dwell too strenuously upon the distinction that yellow fever is *a disease of cities and towns*, whilst intermittent and remittent bilious fevers belong to the *country*. We have demonstrated that in New Orleans, one of the favorite abodes of yellow fever, we have all the forms of summer and autumnal fever met with anywhere—and yellow fever has been seen in very small villages, sometimes even in the country.

The forms of summer and autumnal fever common in the country, are met with in all our Southern cities, from Vicksburg round to Norfolk. These places likewise, at intervals, have epidemics of yellow fever. Nor does yellow fever confine itself to these ports of entry—it sometimes prevails at small towns in the interior of the country and remote from navigation. Time was, when these southern cities, New Orleans, Natchez, Mobile, Augusta, Savannah, Charleston, Norfolk, and others, with a goodly population too, were strangers to yellow fever: they were subject alone to the ordinary endemic forms of the country. But in the course of events this *new type* made its appearance in an unaccountable manner. Why did not yellow fever prevail at Mobile and Natchez previous to 1817, at Vicksburg, before 1841, and at Rodney before 1843? We know not, for we are ignorant of its cause; but there stand the *facts*, and we must account for them in the best way we can. Something must take place in these localities to produce occasionally this modification of endemic fever. Whatever be the essential nature of the remote cause of fever, it must be subject to modifications. Like causes produce like effects; but it is notorious that the prevailing fevers of successive seasons vary considerably at the same place. These variations, therefore, must be attributable to *modifications of the cause;* which is certainly a more rational supposition than

to attribute the various types of concomitant fever to the simultaneous action of separate, distinct and specific causes.

But we will pursue the subject no further at present. Our object has only been to present some of the *facts* and the results of our own observation. The conclusions are our *own*, and have been arrived at after patient and deliberate investigation. They coincide with many of the best writers on yellow fever, and we are happy to know they are entertained by some of the most intelligent and experienced physicians of this city.

Having published in the 3d, 4th and 5th volumes of the New Orleans Medical and Surgical Journal, full accounts of the yellow fever which prevailed here in 1846, '47, and '48, we shall now proceed to give a brief report on the disease in 1849.

The Yellow Fever of 1849.

After the decline of cholera in June, the endemic fevers of this locality rose in the ascendant and prevailed to but a moderate extent, and we think, in the mildest form of their different types ever seen. Seldom have the physicians of the city had less to do during the summer and autumn, than in 1849. This is more particularly set forth in the monthly journal of our General Report. Yellow fever attracted but little attention, and was never spoken of as an *epidemic;* yet it will be seen that 769 deaths from it were reported to the Board of Health.

The admissions for fever into the Charity Hospital were quite numerous, and the mortality from yellow fever considerable. A great majority of the deaths from fever, in the city, occurred at this institution. The ratio of deaths to the number of yellow fever cases admitted into this hospital was about as great as usual; which would appear to contradict our remark as to the *mildness* of the prevalent disease; but, as paradoxical as it may appear, we think this great mortality may correctly be attributed to the *mildness of the disease.* It is notorious that the class of people who go to the Charity Hospital for yellow fever, is composed chiefly of robust laborers and mechanics, who generally defer applying for admission as long as their sufferings are endurable—often too late for successful treatment. This is the principal cause of the greater mortality at this Hospital than in private

practice every year. These people have no idea of prudence or discretion, and are ignorant of the vast importance of early treatment, both in yellow fever and cholera. They keep about their business as long as they can, or stay at home and do nothing until they become *dangerously ill*, before applying for medical aid. If a violent disease, with urgent and distressing symptoms, be prevailing, they are driven in earlier; but if a disease equally dangerous, though mild and insidious in its attack, be prevailing, they still wait to become *really ill* before calling for relief. Now, it is admitted, that yellow fever may assume either of these types, and yet certainly lead to death if not promptly and judiciously treated. It matters not whether the fatal stage has been arrived at by the *mild* or the *violent type;* it is then the same thing, and they will all likewise perish with black vomit or other hemorrhages. During this season nothing was more common than to see patients admitted from the 3d to the 6th or the 7th day of fever. There was then no difficulty in the diagnosis, and these were pronounced *yellow fever*. In fact, many of them were but little better off than if they were in the collapse of cholera. Cases not so far advanced, or of milder type, were promptly relieved, and discharged under a *different name*. The table we shall presently insert will show an unusual number of other fevers admitted during the prevalence of yellow fever.

The cases of fever seen in private practice were of the same character—most of them so mild and so easily cured as not to be called yellow fever; but those that terminated fatally, generally presented the characteristic features in the end. If *death*, or a *near approach to it*, be required to enable us to make a diagnosis, we can never expect to get much credit for our skill in treating yellow fever. But the fact is, there prevails much error upon this point. During the yellow fever season in New Orleans, any attack of fever, be it intermittent, remittent, or what not, in an *unacclimated person*, if neglected or mal-treated, is liable to terminate in hemorrhage and yellowness of the skin—and then no one will hesitate to call it yellow fever. If properly treated and promptly relieved it is called intermittent or remittent bilious fever.

The following table will show the relative proportion of the

different types of fever admitted into the New Orleans Charity Hospital during each month of the year 1849:

Fevers.	Jan.	Feb	Mar	April.	May	June.	July	Aug	Sept.	Oct.	Nov.	Dec.	Monthly Totals.
Intermittent	109	114	138	117	69	155	368	592	763	720	360	684	4439
Typhus		127	193	140	128	65	43	44	49	21	23	58	891
Typhoid	79												79
Remittent	5	10	13	14	30	49	72	166	223	116	76	50	824
Bilious	6	6	19	9	6	10	39	20	11	3	1		130
Yellow							2	28	374	520	130	6	1060
Ephemeral	4	8	18	18	6	2	7	8	7	1	2	1	82
Congestive					1	4	2	6	8	8	4	6	39
Pulperal						1		2		1			4
Scarlet											1		1
Bilious	6	6	19	9	6	10	39	20	11	3	1		130
Cerebral	1				1				1				3
Continued	1					6	6	1	2	2	1	1	20
Total	205	265	381	298	241	293	540	869	1418	1392	806	806	7575

Here we may note the great preponderance of intermittents over *all the others put together*, and over any other type at *all times;* also the *prevalence of various types of fever at the same time;* besides other points which we need not mention. These statistics certainly substantiate the views we have set forth.

The yellow fever of this year commenced about the last of July, when, as will appear above, those marked *remittent and bilious* were quite rife. The following table will show how the first cases of yellow fever appeared at the Charity Hospital. Some were seen in private practice fully as early.

A TABLE

Showing the date of admission, length of residence in New Orleans, the time sick when admitted, date of discharge, and the result of the FIRST FIFTEEN CASES *of* YELLOW FEVER *at the Charity Hospital in the year* 1849 *:*

Date of Admission.				Residence in New Orleans.	Sick when admitted.	Date of Discharge.	Result.
1st	Case	July	28th	3 months.	1 day.	July 30th.	Died.
2d	"	August	1st	9 years.	unknown.	" 11th.	Recovered.
3d	"	August	5th	2 years.	5 days.	July 6th.	Died.
4th	"	August	6th	7 months.	7 days.	October 24.	Recovered.
5th	"	"	6th	3 days.	2 days.	August 9th.	Recovered.
6th	"	"	6th	2 years.	5 days.	August 9th.	Died.
7th	"	"	11th	1 month.	unknown.	" 12th.	Died.
8th	"	"	12th	1 year.	2 days.	" 23d.	Recovered.
9th	"	"	18th	7 months.	4 days.	" 22d.	Recovered.
10th	"	"	18th	5 months.	2 days.	" 20th.	Died.
11th	"	"	22d	3 months.	unknown.	" 22d.	Died.
12th	"	"	22d	18 years.	"	October 16th.	Recovered.
13th	"	"	24th	3 years.	3 days.	August 25th.	Died.
14th	"	"	24th	4 months.	1 day.	September 1st.	Died.
15th	"	"	24th	4 months.	4 days.	August 28th.	Died.

There were thirteen more cases admitted during this month; but these are sufficient to show how the disease commenced. From this time the number of cases steadily increased until October, after which month it rapidly declined.

The Annual Report of the Charity Hospital will show the relative number of admissions, discharges and deaths, from the different fevers, during the year.

We were in attendance at the Charity Hospital during the months of September, October and November, and saw cases of intermittent, mild remittent and dysentery, run into well-marked yellow fever. Dr. Brickell informs us that he had a case in his ward, which entered as an intermittent, and was relieved; but before leaving the hospital a relapse occurred which proved to be decided yellow fever. This was also relieved, but before convalescence was established the patient fell into distinct intermittent fever again. An experienced medical friend told us of a case of intermittent fever in private practice, which most unexpectedly terminated fatally with *black vomit*. Late in the season the fevers were slow in their progress, in many cases not coming to a crisis till the 9th, 11th or 13th day, as occurred in 1846.

We saw no fatal case in private practice. Those which we saw early in the attack we found no difficulty in relieving promptly—a few which were far advanced when we were called, made narrow escapes.

We shall now offer some of our views on the pathology and treatment of yellow fever. They are somewhat novel on both points, but we believe them correct or we would not publish them. They are necessarily brief and imperfect, but will be enlarged at a future time. when we will candidly report the results of further experience.

Treatment. The various plans of treatment approved by the different physicians of the city were pursued this year, and we presume with satisfactory results. We will not undertake to describe them. As for ourself, in furtherance of the views set forth in our accounts of the epidemics of 1847 and 1848, we trusted fully to what we have termed the "*abortive method by quinine*," and with results entirely satisfactory; when called to a case within twenty-four or thirty-six hours of the attack, we seldom failed to cut short the fever by large doses of the sulphate of quinine in combination with opium or morphia, frequent-

ly followed by a little blue mass or calomel. Our usual mode of proceeding in this stage is, to order at first a hot, mustard foot-bath and a purgative enema—then give to an adult 20 or 30 grains of quinine with 25 or 30 drops of laudanum, or one or two grains of opium, or the fourth of a grain of sulphato morphiæ, at one dose. This would generally reduce the vascular and nervous excitement completely in the course of a few hours, throw the patient into a profuse perspiration, relieve all pain and produce sleep. The bowels were kept open by some gentle means, and more or less quinine was repeated as occasion required. We recollected but one fever patient that required cupping, and we did not have a single one bled from the arm.

In the early stage of yellow fever the derangement of the system is *entirely functional*, and consists chiefly in *lesion of innervation*. In the advanced stages it is altogether a different affair—*organic lesions have then taken place, and the blood is altered*. As soon as the attack is fully developed, the indications are, to reduce nervous and vascular excitement, relieve pain, and keep the principal emunctories (skin, liver, kidneys, &c.) in steady and free action; thus arresting diseased action in the incipient stage. Experience has proven that all this *can be done* by the remedies just mentioned, if resorted to *early enough*. In the advanced stages you have a different state of things—you have to contend with engorgement of the gastro-intestinal mucous membrane and of the liver, spleen, kidneys and brain, a slugglish circulation of altered blood, and an arrest of all the most important, secretions. The nervous centres, which firs suffered and complained, now become calm and composed; the intellect generally retains its natural clearness, and the patient is often lulled into an illusive sense of safety, whilst the experienced physician knows that *irreparable injury has been already done*. In these latter stages, the physician should abstain from attempting to do too much. The main reliance must be upon the energies of the constitution, which are to be aided and fostered with the utmost circumspection. The indications are, to husband carefully the remaining strength, to keep the circulation and excitement as well equalized as possible, to restore the suspended secretions, and to keep up the process of nutrition. To fulfil these we endeavor to enforce the most perfect quietude, and resort to blisters, warm sponging, fomentations, carminative antacid mixtures, gentle stimulants and mild nourishment.

We would by no means be understood as intending to denounce or proscribe sanguinous depletion in the treatment of yellow fever. On the contrary, in violent attacks upon persons of plethoric habit, we look upon it as of great value and importance. Free depletion is applicable to the same stage that quinine in large doses is, and is a valuable adjuvant to that remedy. We merely wish to state that since 1847 we have learned from actual observation that liberal doses of quinine and opium, given *early in the disease, and during the exacerbation*, will subdue the fever and permanently and safely cut it short of its natural course, in a great many cases, without resorting to blood letting in any manner. We know that this is *incredible* to those who have not witnessed it—we could not believe it ourself till we had *seen it done over and over again*. If what we state be true, however, should it not be made known generally? Is it not desirable to avoid, if possible, all the pain, exhaustion and anxiety, (not to say *danger*.) necessarily incurred whilst slowly and cautiously conducting a case of yellow fever through all its natural stages? Is it not an object of vast importance, to cure the disease "*cito, tute et jucunde!*" If we are laboring under false impressions and have not viewed aright the phenomena which have fallen under our observation, we trust we shall become convinced of the error. We have witnessed the various plans of treatment ordinarily pursued in this city, and we know that our experienced and skilful physicians do manage all sorts of cases with commendable success by their own methods. when they have a fair opportunity. Every one has some favorite general plan, and we only claim the same privilege, after having tried most of the others. If we did not think our own plan the best we would not follow it. We may endeavor to demonstrate its superiority without condemning or denouncing that pursued by others. That large doses of quinine and opium, *given improperly, may do much mischief*, is unquestionably true; but the same may be said of epsom salts, calcined magnesia, or any thing else that possesses any power whatever. Nothing is more true than that any medicine which has great power to do *good*, is likewise endowed with corresponding capacity to do *harm*, if misapplied.

In presenting these views relative to the therapeutic action of the sulphate of quinine, as yet novel, if not incredible, to the great body of the Medical Profession, we are aware that we are exposing ourself to much animadversion; but conscientiously believ-

ing them to be correct, we shall not shrink from proclaiming them. They will not appear so novel or astounding to many of the ablest and most successful practitioners of the South; though to the extent we have gone they are neither generally known or received. The *sedative* powers of large doses of quinine, given during the early exacerbation of our summer and autumnal fevers, both remittent, bilious and yellow, have been proclaimed by some of the physicians of this city, by the army surgeons, and by the physicians of the Southern States, in the Medical Journals, for the last ten years. We perceive that these views are gradually extending to the North, and will certainly take there, if properly tested; but it will require some time to prepare the minds of our northern brethren for such a *revolution in therapeutics* as they must effect, when established.* The wonderful powers of the sulphate of quinine over the yellow fever of New Orleans are briefly but forcibly set forth in the essay of the late Professor John Harrison, to be found in the second volum of the New Orleans Medical and Surgical Journal. Also by Dr. J. Beugnot, a prominent French practitioner of our city, in the first volume of the same Journal. Dr. B. informed us, in a recent conversation, that notwithstanding the favorable mention he then made of the *abortive method*, by large doses of quinine immediately after free blood letting, he did not adopt it, but relied chiefly on *the lancet alone*. He says he is now strongly inclined to think that the former is *the very best practice that can be followed in yellow fever*. The older physicians, both North and South, may be expected to set their faces against them as they have ever done against all innovations; but the younger ones, will be apt to adopt them, if they practice in the South. Quinine is given in five or ten grain doses, by a number of physicians of this city and the Southern country, who have not yet adopted the *abortive method*. This is a great improvement, but they will *go further* after a while. We saw twenty grain doses with twenty-five or thirty drops of laudanum, given at the Charity Hospital, in the early stages of yellow fever, by physicians, this season, who would have shuddered at such a prescription three years age.

* See the "discussion on the powers of quinine in remittent fevers" in the Philadelphia County Medical Society meeting of December 1849; published in the Medical Examiner for Feb. 1850. The remarks of Drs. Parrish, Jewell and John Bell, are decidedly favorable to large doses, whilst the President, Dr. S. Jackson of Northumberland, clings to the old notions. If these gentlemen could see a few practical illustrations of the "*abortive method*" they would doubtless be delighted as well as astounded.

We had not expected to say so much about quinine as we have done in this article, but made it the subject of a *special report.* Our pressing engagements, however, do not allow time to prepare such a report for this volume. The addition of another year's experience will qualify us better for the performance of this duty.

We have said all that we deemed necessary about the yellow fever of 1849. We are entering upon a year which, if it correspond with that which followed the previous great overflow in 1817, will afford extensive opportunities for investigating every thing relative to yellow fever.

REPORTS FROM LOUISIANA.

ARTICLE VI.—STATISTICS OF YELLOW FEVER AND OF ALL DISEASES, IN THE CHARITY HOSPITAL OF NEW ORLEANS FOR THIRTY YEARS, FROM 1820 TO 1849 INCLUSIVE.—BY J. C. SIMONDS, M. D.*

THE table shows for each year, and for each quinqenial period the discharges, the deaths and their sum, and the mortality per cent. of yellow fever, the entire number of discharges and deaths of all diseases, and the proportion per cent. of yellow fever. The remarks are not based upon the figures in the table, which speak for themselves, but for the years 1820, 1822, 1824, have been obtained from a report of the Board of Health, and for the years from 1832 to 1844 from a paper by the late Dr. John Harrison, in which he states that "the terms mild epidemic, epidemic, and violent epidemic, are intended to express degrees, both as to the prevalency and malignity of the disease." "In 1832 a violent epidemic of Asiatic Cholera raged at the same time the fever prevailed. In 1833, 1834 and 1835, there also existed sporadic cases of Cholera."

* After closing the preceding report we were kindly furnished by Dr. Simonds with the following valuable statistics of yellow fever at the Charity Hospital; for which we return our grateful acknowledgments. We give them without comment, as they speak for themselves.

The figures for 1820 and 1821, are the numbers of admissions; those of the discharges and deaths and the cases of yellow fever not being accessible.

The figures here given have been obtained from various sources, chiefly from the annual reports on the books of the hospital, but in part from the journals of the legislature. Every effort has been made to make them correct by comparing the various data accessible to me.

The calculations are based upon the *discharges and deaths*, which show the cases treated to termination, and are presumed to be more correctly discriminated than the *admissions*.

The table shows the average mortality of yellow fever during twenty-five years to be 44 per cent., and that it has slightly diminished. That this diminution is due to the adoption of the quinine treatment, or to any improvement in the methods of medication, may be doubted, as it is so very slight. It is generally supposed that the disease has been gradually assuming a less virulent type, and it is very probable that the proportion of mild cases entering the hospital was less formerly than of late years

During twenty-five years 9½ per cent. of all the discharges and deaths in the hospital have been attributed to yellow fever. From 1825 to 1829 the proportion was greatest, being nearly 13 per cent., and from 1830 to 1834 it was least, being less than 4¾ per cent. Two circumstances influence this proportion—1st. the *name* assigned by the physician to the diseases of the patients; and 2d, the general character of the cases seeking relief at the hospital. To what extent the fashion of the day has influenced the appellations given by the physicians to the cases reported cannot be determined; but I am satisfied that many cases now reported as yellow fever would not have been so named in the period of 1820 to 1835. Without a complete and scientific classification of all the cases reported, it is not possible to determine the general character of the cases seeking relief, nor to estimate the influence of fashion on the extent to which individuals are induced to resort to the hospital. A complete analysis of the reports for the last eight years, proves that *hundreds* are now admitted with trifling and unimportant *ailments*, and that the number of such cases has increased more rapidly than other diseases of the same class, with which alone they should be compared.

From the records, embracing nearly 13,000 cases of yellow

fever, and 130,000 cases of all diseases, no further conclusions can be deduced than those presented by the table, in consequence of the manner in which the books have been kept, except indeed by an examination of each of the original entries. Such an examination would be very laborious, but would furnish a few particulars of some interest, though of not much value, such as the sex, the age, the color, the place of nativity, and the period of residence in New Orleans, the first of which at least should in the annual reports accompany the detailed statement of diseases. The very important practical point of the influence of treatment cannot be even examined, in consequence of the arrangements adopted, and the mode in which the books have been kept.

	Discharged.	Died.	Total.	Mortality per cent.	Total of all diseases treated.	Proportion of Yellow Fever.	Remarks.
1820					(1069) admissions.		
1821					1308		Epidemic.
1822	98	239	337	70.92	1689	19.95	Epidemic.
1823		1	1	100.	1266	.08	
1824	59	108	167	64.67			
1825	40	49	99	59.49	1207	8.20	
1826	19	5	24	20.83	1408	1.70	
1827	263	109	372	29.30	1853	20.08	
1828	160	130	290	44.83	2390	12.13	
1829	220	215	435	49.43	2548	17.07	
1830	139	117	256	45 72	2790	9.18	
1831	1	2	3	66.67	3558	.08	
1832	8	18	26	69.23	2271	1.15	Epidemic; also Cholera.
1833	212	210	422	49.77	3731	10.75	Violent epidemic; cholera
1834	55	95	150	63.33	5797	1.59	Epidemic.
1835	221	284	505	56.24	6225	8.11	Mild epidemic.
1836	1	5	6	83.33	4748	.13	
1837	556	442	998	44.29	6060	16.46	Violent epide'c.
1838	5	17	22	77.25	4573	.48	
1839	634	452	1086	41.62	4566	23.78	Violent epide'c.

1840		3	3	100.	4989	.06	
1841	520	594	1114	53.14	4249	26.92	Violent epide'c.
1842	214	211	425	49.65	4277	9.93	Epidemic.
1843	609	487	1096	44.44	4713	23.25	Epidemic.
1844	86	83	169	49.11	5772	2.93	Mild epidemic.
1845	1		1	0.00	6009	.02	
1846	50	96	146	65.82	7929	1.84	
1847	1584	895	2479	36.1	11406	21.73	Violent epide'c.
1848	806	420	1226	34.26	11907	10.30	Mild epidemic; cholera.
1849	510	545	1055	51.66	14878	7.10	Cholera.
1820-4							
'5-9	702	518	1220	42.46	9406	12.97	Periods of five years.
'0-4	415	442	857	51.51	18147	4.72	
'5-9	1417	1200	2617	45.86	26171	10.	
'40-4	1429	1378	2807	49.09	24000	11.67	
'5-9	2951	1956	4907	39.86	52129	9.61	
1820-9							
'30-9	1832	1642	3474	47.27	44319	7.84	Periods of ten ten years.
'40-9	4380	3334	7714	43.22	76129	10.13	
1825-49	6914	5494	12408	44.27	129854	9.55	25 years.

LOUISIANA REPORTS.

ARTICLE VII.—Report on epidemic cholera in the city of new orlea s, 1848–'49.—by the editor.

This terrific disease, which, in its mysterious course over the world, so severely scourged our devoted city sixteen years ago, re-appeared amongst us in the month of December, 1848. We saw its dark cloud in the distant regions of the East, and anxiously marked its devastating progress over the fairest portions of Europe. The "*shadow*" was already upon us, but we fondly hoped for a longer respite from the much dreaded "*coming events.*" The epidemic had then hardly reached the shores of the Atlantic, and there lay the vast ocean, with its billows and its tempests, between us and our destroyer. No vessel floating over the trackless waste would willingly bear so unkind a passenger—no port could welcome such a visitor. But how unaviling were all our hopes, our apprehensions and our prayers! The laws of nature are unalterable, and the ways of Providence unfathomable. Man, the master of the world, is but a frail and impotent being: endowed with such great capacities and surrounded with so many means of comfort and happiness, he is yet ever exposed to the elements of destruction and perishes like the flower of the field.

The nature of epidemics is one of the most interesting portions of medical sience, and the history of *cholera* forms the most curious and incomprehensible chapter in this department. In the report about to be submitted, we shall endeavor to give a faithful acccount of the rise, progress and extent of the late epidemic in the city of New Orleans and its vicinity—its general character, treatment and mortality—together with such other remarks as may appear to be relevant to the subject. Inasmuch as a vast amount has already been written upon cholera, we shall endeavor to be

as brief as possible; especially, as we hope to present reports from correspondents in other parts of the State of Louisiana.

On the morning of the 28th of January, there appeared, in one of our city newspapers, a communication from the editor of these reports, addressed to the editor of the *New Orleans Medical and Surgical Journal*, giving a historical sketch of the late epidemic, from its commencement, in December, up to that time. This paper was intended for the January number of the Medical Journal, which, from some cause, was delayed a month beyond its regular period of appearance. It so happened, however, that on account of its length, it could not be admitted after it was prepared—there being but little wanting to complete the number. The author was then persuaded, by some of his friends who saw the manuscript, to offer it for publication in one of the newspapers. The reasons for doing so were, that the historical sketch might probably be interesting to many readers, and that the hints given, as to the proper conduct of the community when exposed to such a pestilence, were of so general a character as not to be inconsistent with strict professional etiquette. There may have been some difference of opinion as to the propriety of the course adopted; but more mature reflection has not altered the impression under which the author acted, and he has had the gratification to see his paper quoted in nearly all the medical journals of the country, as well as in the best monograph that has appeared on the subject—(Bigelow's Tardieu.) With this apology, we will here insert the account of cholera which we gave in January last:

"*To the Editor of the New Orleans Medical and Surgical Journal:*

Dear Sir—According to your request, I shall offer you some brief memoranda of the epidemic cholera, which has recently scourged our city. We have passed through a long-dreaded and most dangerous crisis; and now that the "action" is over, and the dust and smoke of the "battle field" (if you will allow the metaphor) are cleared away, it is both meet and proper for us to review the scene, take account of the "killed and wounded" and endeavor to learn from the result some lesson of wisdom and usefulness. Nor do I deem my *military metaphor* altogether inappropriate to the present time. True, our city is shrouded in mourning and sadness, yet many have escaped the perils of death;

and, as we have recently commemorated our almost miraculous deliverance from the arms of the invader in days of yore, let us not be unmindful nor ungrateful for our recent deliverance from an impending danger scarcely less terrific. We have encountered an *unseen and a dreadful foe*—one whose progress is marked by the victims strewn along his course; yet even *his* ravages have not been unmixed with mercy. Here and there a victim was overwhelmed, as by an avalanche, and there was no help for him; but, for the most part, fair and timely warning was given—and those who attended to the dictates of wisdom and prudence, found but little difficulty in escaping the impending danger. Amidst the general alarm and distress that pervaded the community, the duties and responsibilities which devolved upon the respectable portion of the medical profession were of the most serious and important nature: they were met and performed with a firmness and fidelity worthy of a passing notice. Without regarding the *unjust* and *illiberal imputations* that were cast upon the profession, it is not to be denied that the physicians of New Orleans have boldly stood their ground, shared the common danger and done all in their power, as well to instruct their fellow-citizens how too keep well, as to rescue them when ill. What better evidence need I adduce to substantiate this assertion, than the fact, that, although nearly every body felt more or less the epidemic influence, there were comparatively but few bad cases and very few deaths amongst the better classes of people—such as usually apply to respectable and educated physicians for medical aid. The reason is obvious—these people applied for medical aid in good season; they obtained the best advice and remedies, and were promptly cured; whilst others were either deluded into false security by relying upon some worthless but *well puffed nostrum*—or, through ignorance and temerity, neglected all remedies until the disease had advanced beyond the curable stage. This was the penalty of ignorance and folly, and a severe one, too. Without further preliminaries, let us note some of the more prominent facts connected with the rise, progress and results, of the epidemic.

"The commencement of the late epidemic may be dated from the 11th of December, when the ship 'Swanton' arrived at this port, thirty-nine days from Havre, with two hundred and eighty steerage passengers, consisting of German and French emigrants

—chiefly German. Now, whether it was a mere coincidence, that epidemic cholera broke out in this city just at the time when a vessel arrived having some cases of cholera on board, or that said vessel brought the infection, which rapidly spread through the whole community, is an exceedingly debatable question; but let me go on with a statement of such facts and circumstances as I have, before I attempt to debate it. The whole subject is replete with interest: every thing connected with it is new to me, and I will endeavor to make the most rational induction in my power, having no preconceived theory to substantiate.

"For several weeks previous to the arrival of the 'Swanton' the weather had been changeable, for the most part very warm, though there had been several white frosts. Yellow fever had almost disappeared, and there was but little sickness prevailing; though, among the existing diseases, were observed some remarkable cases of stomach and bowel complaints. On the 5th of December, I attended a gentleman on Customhouse street, who labored under vomiting, pains and spasms in the bowels, and prostration to such a degree, that, if epidemic cholera had been supposed to be here, no person would have hesitated to pronounce him a case. He had no rice-water evacuations, his bowels were rather costive, and he vomited bile; but many such cases have been seen since the epidemic was declared. He recovered after two or three days illness and has not been sick again.

"Some days previous to this, three or four negroes were attacked with cholera morbus on the same night, in Gravier street—they were promptly treated and all soon recovered. Similar cases were observed in the practice of a number of physicians in different parts of the city, all going to show, as it appears to me, that the *epidemic influence of cholera was gradually being matured and developed in our midst.*

"I have recently learned some other facts, which are worthy of notice in connection with the commencement of this epidemic. The ship 'Guttenberg,' from Hamburg, with some two hundred and fifty steerage passengers, after a passage of fifty-five days, arrived at New Orleans on the 6th of December. Cholera was prevailing at Hamburg when this ship left, and six or seven deaths from it occurred on board before she got out of the Elbe. As soon as the vessel got out to sea the disease subsided completely, and no more cases occurred during the whole voyage. As there were no cases of cholera on board when she arrived here, it at-

tracted no attention, although she came from an infected port. I am informed, by one of the visiting physicians of the Charity Hospital, that soon after the epidemic broke out here, a man died in one of his wards, who stated that he had recently arrived from Germany on board a vessel which had lost several passengers by cholera. What became of the other passengers of the Guttenberg I know not.

"In addition to this I should not omit the following fact, obtained from the records of the Mayor's office and the newspapers of the day, viz: the bark 'Callao,' from Bremen, having one hundred and fifty-two German emigrants on board, after a passage of forty-eight days, arrived at New Orleans on the 8th of December, and was anchored off Slaughterhouse point, on the opposite side of the river. The secretary of the Board of Health was sent to examine her on the 11th of December and reported, that, 'during the voyage, eighteen of the emigrants died, some of them with *purging* and *vomiting* and others with violent attacks of diarrhea. The last death occurred on the 30th of November. At present no case of sickness on board, and those who left the vessel since its arrival are well. N. B. It is reported in the log-book that the first case that died perished from cholera. This is merely the opinion of those on board, and is not entitled to much weight.'

"The Callao, remained over on the opposte side of the river until about the 4th of January, when she was brought over to this side to be loaded.

"The ship Swanton left Havre on the 2d or 3d of November. *There was no cholera at Havre when she left*, nor have we heard of any there since. There was none in any part of France; but the epidemic had reached Germany, and some of the passengers on board of the Swanton were German emigants. Whether they came from an infected district or not, we are not informed. The vessel was out *twenty-six days* before a death occurred, the first being from *consumption*, on the 28th of November. We learn that sixteen or seventeen deaths occurred during the passage, most of them from bowel complaints, supposed to be dysentery. The Swanton reached New Orleans on the 11th of December, and took position at the wharf *in the upper part of the second municipality*. On the morning of the 12th a woman was carried from the ship to the Charity Hospital, and found to be in a complete state of *collapse*. She was reported to have been

attacked the night previous with violent vomiting, purging and cramps.

"The intelligent house surgeon, Dr. Wedderstrandt, as well as a number of other physicians who saw this case, at once recognized it as a case of *Asiatic cholera*, and the Board of Health was notified of the fact. The woman died at 6 o'clock, P. M. The secretary of the Board, Dr. Hester, was immediately despatched for the purpose of examining the condition of the vessel and passengers. He reported the facts above stated, and in addition, that 'he found two old women laboring under bowel complaints, and two children suffering from debility—the ship in a fair condition as regards cleanliness—passengers generally look well.'

"On the morning of the 13th, a man, who came over on the same vessel, was brought to the Charity Hospital and found to be in a complete state of *collapse*. He was cold and pulseless, but his intellect was perfectly clear and he gave the following account of himself. He said he had a slight diarrhea on the morning of the 11th, but he walked about the city and ate an apple. On the 12th he left the ship and went to a boarding house near Poydras market; still had slight diarrhea, but ate no fruit this day. After going to bed at night was attacked with severe vomiting, purging and cramps; took no medicine, and was reduced to a state of *collapse* when he entered the hospital. He died about 6 o'clock, P. M. The books of the hospital show three other cases of cholera admitted this day, all of which terminated fatally. They were from different parts of the city, and *not passengers of the Swanton*. On the same day I observed two women in the hospital, from the same ship. They had only slight diarrhea and were promptly relieved. The two fatal cases were seen by a number of physicians, most of whom felt no hesitation in pronouncing them *Asiatic cholera*, though a different opinion was expressed by some. The rumor soon spread through the city and produced great consternation.

"On the evening of the same day (13th of December) that the second case was taken to the Charity Hospital, a man, who has resided here many years, and who does business not far from the St. Charles Hotel, came into my office with strong symptoms of cholera. He had not been near the ship Swanton, nor seen any of her passengers. I prescribed for him, and on visiting him at his room, half an hour afterward, found him extremely ill, with severe pain in the bowels, copious watery purging, skin bathed

in cold sweat, great thirst and general prostration. His condition was so alarming and he derived so little relief from large and repeated doses of opium, calomel, camphor and capsicum, assisted by sinapisms, stimulating frictions, &c., that I determined to resort to the inhalation of *chloroform*. By this means he was made perfectly easy in about two minutes, and remained so until the medicines he had taken had time to act. He got through the night pretty well and recovered in a few days from a dangerous illness.

"On the 14th of December, the Board of health held a special meeting, and issued a card, which appeared in the newspapers the following morning, assuring the public that there was no foundation for the rumor that the Asiatic cholera had made its appearance in the city. This statement was seconded by flourishing editorials in several of the newspapers of the day, in which those who had announced the appearance of cholera were sneered at and soundly rated.

"On the 15th of December, there were eight cases of cholera admitted into the Charity Hospital, and I heard of cases in the private practice of a number of physicians.

"In a letter from a learned physician of this city, to a distinguished professor in Paris, which was published in the Commercial Times of the 23d instant, the author mentions three fatal cases of cholera, that occurred on Customhouse, Bienville and Chartres streets, on the 15th. He goes on to say: 'It is well enough to remark here, that these three primary victims of cholera in New Orleans were all cooks, going every morning, very early, to the principal market in the city, situated on the bank of the river, a cable's length from the infected vessel.' In the latter part of this statement, the worthy author must have made a mistake; for, the president of the Board of Health was informed by its secretary, who was sent to examine the Swanton, that he found her at the *upper end of the second municipality*, which is nearly a mile from the aforesaid principal market, frequented by the unfortunate cooks. So these cases must have originated in a different way.

"On the 16th of December, there were eleven cases of cholera admitted into the hospital, and the disease was evidently rapidly increasing in private practice.

"On this day, I was called to see Dr. J. B. Morgan, of Jackson, Miss., who was attacked the night previous, without having

committed any other indiscretion than eating some fish and oysters at dinner. When I arrived at his room I met Dr. Farrell, who had seen him before, and had good reason to be provoked at the difficulty he found in convincing Dr. Morgan of the danger he was in, and the importance of prompt and vigorous treatment. Dr. Morgan had already passed about thirty liquid evacuations, then had cramps in his legs, and, in fact, was on the verge of collapse. Being an old friend and neighbor of mine, I joined my entreaties to the arguments of Dr. Farrell, and we did all we could to convince him of the importance of vigorous treatment; but all to no purpose. He insisted that he was not dangerously ill; that he had been similarly affected many a time before, and that, if he were not disturbed, he would soon be well. The sequel verified our worst apprehensions. He was incorrigibly obstinate, dallied too long with a dangerous disease, and was lost!

"The panic now prevailed throughout the city, and vast numbers of people fled in every direction; yet some of the leading newspapers, and a few physicians, hooted at the idea that the disease was *Asiatic cholera*, and the Board of Health still kept aloof. From this time the disease increased so rapidly that, on the 22d of December—ten days from the time when the first case was admitted into the hospital—the number of deaths by cholera, in that institution, amounted to *twenty-two*, and, in the whole city, to *forty-five*.

"I may be permitted to state, in this connection, that the Board of Health published, on the morning of the 23d of December, that Asiatic cholera was 'epidemic' in the city— the number of deaths from it the day previous having been forty-five; and they announced the cessation of the epidemic on the 6th of January, when the deaths amounted to thirty-eight.

"The epidemic raged most severely from the 22d to the 30th of December, having reached its zenith about the 28th, on which day the deaths by cholera were *ninety-two*. From the 16th to the 22d, the weather was *oppressively warm*, the thermometer rising as high as 84°. From the 22d, it was cool, wet, gloomy, till the night of the 30th, when there fell a white frost. On the morning of the 1st of January, there was another white frost, and, from that time, the disease declined steadily.

"The epidemic influence appeared to be felt by almost every person in the city, whether native or foreigner, acclimated or

unacclimated. Thousands complained of an extraordinary uneasiness in the stomach and bowels; but, in a vast majority of instances, it was easily relieved, and but few bad cases occurred amongst those who were prudent and paid proper attention to the premonitory symptoms. The lower classes of people have evidently suffered most, which may be attributed to *ignorance* or *neglect*. The mortality at the Charity Hospital has been very great; yet no one can be surprised at it who visited that institution during the epidemic, and witnessed the condition in which the patients were when admitted. Cholera is an insidious disease, that generally steals upon its victims, seldom declaring itself openly until it has them completely within its fatal grasp. I have not a doubt that *seven-tenths* of the people who have recently perished of it, in this city, might have been saved, if they had procured proper medical aid at the onset of the disease. I presume there is hardly a physician in the city who has not been called to persons reduced to the most dangerous condition, by relying too implicitly and too long upon some of the various 'specifics' advertised in our newspapers and *lauded by the editors*. Yet some may have been saved by these very nostrums; for there be many in this goodly Commonwealth, who have such an antipathy to physic, that they will not take it under any circumstances, unless they see its virtues blazoned before the public by the effulgent illumination of factitious puffs and certificates They have a decided *penchant* for the marvellous, the mysterious and the unknown.' They scorn reason and common sense, and have contempt for *honest simplicity* in scientific researches. Like the followers of the veiled prophet of Khorassan, they

"Would be dupes and victims—and they are."

"But let me not weary your patience with matters of this sort. The people are free agents, and have a right to take what medicine they like. If they prefer artful humbuggery to honest, unpretending science, why, let them have it to their hearts' content.

"The mortality from cholera, at its late visitation, compares most favorably with that of 1832, when it first scourged our city. The number of deaths by cholera, from the 12th of December, 1848, to the 20th of January, 1849, as appears from the reports of the Board of Health, amounted to near fourteen hundred —five hundred and ninety-six of which occurred at the Charity Hospital. We learn from an interesting memoir on the cholera

of 1832, addressed to the Academy of Medicine of Paris, by Dr. M. Halphen, a French practitioner of this city at that time, that the disease made its apparance about the 25th of October, in the midst of an epidemic of yellow fever; that, in a few days, it raged severely, and that, in the short space of twenty days, it killed about six thousand people. Dr. Halphen says, that the mortality amounted, on some days, as high as five hundred a day. He estimates the full population of the city then at fifty thousand; and, as cholera broke out during the prevalence of yellow fever, ere yet the absent citizens had returned, and before the customary visitors had dared to come in, he does not think the population, at that time, exceeded thirty-five thousand; thus showing the frightful loss of nearly *one-sixth of the population in about twenty days.* When we read over these sad details, we may well congratulate ourselves upon our happy deliverance from the late pestilence. True, we have lost about fourteen hundred people, and amongst them a few valuable citizens; but what would have been our fate, if so malignant a disease as that of 1832 had broken out in December last, when all of our own people were at home, and the city was full of strangers? In 1832, *the living could not afford decent burial to the dead.* Dr. Halphen states, that, on some days, upwards of one hundred corpses were accumulated at the cemeteries, awaiting interment. Large trenches were dug, into which cart loads of uncoffined bodies were heaped indiscriminately; and, in the dead of night, a great many bodies, with bricks and stones tied to their feet, were stealthily thrown into the river. The same ratio of mortality, at the present time, would demand about twenty thousand victims. Let us turn from the appalling calculation, and thank God that we have been so mercifully spared!

"As in 1832, the epidemic has declined to a stage of comparative security, but the disease has not entirely disappeared. There is as little cholera in New Orleans at the present time, in proportion to the population, as in any other part of the lower Mississippi valley. Whether the epidemic will be rekindled at the approach of the ensuing summer, remains to be seen. If the miserable condition of the city, as regards cleanliness, will have any influence on the event, we may certainly expect it. New Orleans must ever continue to be a prey to the most fatal diseases that prevail, until something efficient is done to improve its sanitary condition.

"The manner in which the cholera has spread from this city, in every direction, forms a problem as curious and difficult as that of its first appearance. Almost every vessel that left the city, a few days after the disease commenced, soon had cases aboard, and, on some of the steamboats going up the river, there were twenty or thirty cases and many deaths. Thus, persons having the disease and dying of it, were carried to all the landings, towns and cities, up the river as high as Cincinnati. In many of these places it spread, to a limitted extent, among the inhabitants; in others it did not. We have, as yet, heard of no place up the river where the disease has prevailed as an *epidemic.** We learn that cholera is spreading among the plantations along the river, and also in the interior of Lousiana. To some of these the infection appeared to be directly carried; in others, it began without any communication with an infected district.†

"The most remarkable mortality that we have heard of, out of the city of New Orleans, occurred in the 8th Infantry, a body of four hundred and fifty soldiers, which arrived here from Jefferson barracks on the 1st of December, and were stationed at the barracks about four miles below New Orleans. There they remained till the 12th, when they embarked for Port Lavacca, in Texas, on board of the steamships Telegraph and New Orleans. These ships reached Port Lavacca on the 15th, but the men did not land till the 20th of December. On the night of the 21st., according to a correspondent of one of our newspapers, the right wing of the regiment, under the command of Brevet Major Gates, moved twelve miles into the country; the left wing, under command of Major Morrison, remaining in Lavacca. During the night, the weather changed from sultry heat to a cold rainy norther, and, by daylight, four soldiers, of those left in town, were dead with cholera, and many laboring under the disease. On the following day, an express from Major Gates came back with intelligence that his men were falling rapidly from the same disease. The disease raged with such severity, that in the brief space of three or four days, *one hundred and fifteen men*, or about one-fourth of the command perished. Yet, strange as it may appear, the correspondent informs us, that 'no cases occurred among the citizens.' Now, these soldiers must have imbibed the morbific cause somewhere, which lay dormant in their sys-

* Jan. 28, 1849. † See Surgeon Jarvis's Report.

tems, like a powerful enemy in ambush, until a fit opportunity was offered for action by the sudden and malign influences of a Texas norther. Then it sprang upon its unsuspecting victims, made dreadful havoc, and, in a few days, vanished.

"We are informed that cholera has prevailed, to a considerable extent, at Houston, Texas, whilst Galveston, on the seaboard, has escaped, although situated on the line of travel from New Orleans to Houston.

"Soon after the epidemic commenced in this city, a trader on Esplanade street took his negroes (about sixty in number) across the lake, and located them in the pine woods, where he hoped they would be perfectly secure. They were all well when they left the city, except one case which terminated fatally on the day of their arrival over there, and continued well for nearly three weeks after reaching their point of destination. The cholera then broke out among them and killed a considerable number in a very short time.*

"At the Charity Hospital, probably as many as fifty cases have occurred amongst the nurses, servants, and persons who had been admitted for other complaints.

"After reviewing the few recent facts which I have just stated, what shall we say about the *contagiousness* or *transportability* of *cholera?* Numberless striking facts, recorded in the history of cholera, would seem to prove, beyond cavil, that it may be transported from place to place, through the medium of persons affected: on the other hand, the numerous instances in which the disease failed to be propagated through this medium, and the *utter futility* of rigid quarantine regulations and sanitary cordons in arresting its march, would seem to authorize a different opinion. Amidst these contending difficulties, if the reader can arrive at a satisfactory conclusion, I can only say, he is more fortunate than myself. Speaking of quarantine, perhaps we may hear, before long, that the city of Natchez, on the river above us, has been protected from cholera by her quarantine. I have been informed that there were some fatal cases of cholera in that place. Moreover, I have good authority for saying, that the quarantine regulations of Natchez

*See Dr. Gilpin's letter.

are *altogether worthless*, except to the officers charged with their enforcement.

"I ought not to close this communication without saying something about the general character of the disease, and the treatment pursued by the physicians of New Orleans. As to the character of the epidemic, I think I may safely say, that *it has not been very malignant*. In most instances the attack was insidious and mild—generally commencing with a looseness of the bowels, attended with more or less griping, and often accompanied with nausea and vomiting. The latter symptoms almost invariably attended those patients who had committed imprudence in eating. Without descending into minutiæ, I may say, that the disease almost invariably commenced with some unusual disturbance of the digestive organs. When this disturbance commanded the attention it deserved, it was generally most easily remedied by the simplest means; but, if neglected, it seldom failed to lead on to the most disastrous consequences. This, then, is the *curable stage* of cholera, and almost the *only stage* in which it can be cured; for, if it be permitted to run on until the patient becomes cold and pulseless, a vast majority will inevitably die. By powerful means reaction may often be established; but the danger is not then passed—a great majority still die of the *consecutive fever*. Say what you will about creating *panic* and spreading alarm among the people; I feel no hesitation in asserting, that, *when epidemic cholera is prevailing, every person who has an unusual diarrhea had better believe he is a case*, and act accordingly. If this simple rule were universally adopted, cholera would soon be rendered comparatively harmless. Thus, according to Dr. Watson, one of the ablest English authors, the disease was arrested in London by the establishment of "*diarrhea dispensaries*," where the poor were supplied, gratuitously, with proper remedies. Thousands applied who otherwise would have waited to get ill before going to hospitals to be treated. Who can deny that it would be well to *frighten* the people, if need be, into this degree of precaution? Without it, you may rest assured, there is no safety.

"I deem it unnecessary to enter into a minute detail of the symptoms that characterize cholera, as they are familiar to

most persons, whether belonging to the medical profession or not. It may not be amiss to mention a few of the most remarkable ones that attended the late epidemic. Many bad cases were marked by an *obstinate vomiting of bile*, which continued until death. The vomiting would continue for days, and incredible quantities would be thrown up. In these cases, the diarrhea was generally moderate, and sometimes absent. The worst cases were those in which the rice-water discharges were profuse, as well from the stomach as from the bowels. In these, there was no appearance of bile whatever. A few cases were seen at the Charity Hospital which terminated in *black vomit.*

"When collapse supervened *early in the attack*, before the system was too much exhausted by copious rice-water evacuations, it was less difficult to bring about reaction, and there was better hope of ultimate success. So far as I know, the only cases of recovery that took place after decided collapse were of this kind.

"Where reaction from a state of collapse was slow and difficult, a sort of typhus fever supervened, which lasted for some days, and generally terminated fatally with affection of the brain. The intellect was generally clear and undisturbed to the last, excepting those who died of the consecutive fever. It is marvellous and astonishing to witness the mental clearness and composure of some persons dying with cholera! Whilst the attendant relatives and friends are agonized with grief at the sudden and awful calamity, the poor victim is often seen *supernaturally calm* and uttering words of consolation with the expiring breath.

"The treatment of cholera admits of much variation. Educated physicians everywhere concur in the indications to be fulfilled, or what is to be done; but amidst the multiplicity of remedies at their command, of course each one resorts to such as he thinks are best adapted to the circumstances of the case. Doubtless the same object may be accomplished by a variety of means, if it can be accomplished at all; and, in our choice of remedies, we must be guided by observation and experience. In the treatment of what are called the premonitory symptoms, the first indication is, to check the diarrhea as soon

as possible, keeping an eye at the same time to the important secretions of the liver, kidneys and skin. For this purpose, physicians very generally resort to opium and its preparations, combined with stimulants and aromatics; or, opium with some mecurial—or with quinine. According to the urgency of the symptoms, a good prescription may be made of laudanum, or paregoric and brandy—or laudanum, spirits of camphor and tincture of asafœtida—or laudanum, essence of peppermint and compound spirits of lavender—or calomel, opium and capsicum, or camphor—or equal parts of paragoric and tincture of catechu.* The following is a recipe which I found to answer very well, viz.:

R.—Sulph. quinine,	ʒ i.
Tinct. opii,	ʒ iss.
Tinct. capsici comp.	ʒ iii.
Mucilage with aqua cinnamon,	℥ iv. M.

Give a table spoonful and repeat after every two loose stools.

"Although opium is so often found in the prescriptions above, I should mention that some physicians disapprove of it and seldom prescribe it in cholera, except by enema. These gentlemen place their chief reliance upon calomel, combined with camphor, capsicum and the like. As to the sulphate of quinine, it appears to be serviceable in almost every kind of disease that occurs in this region. It possesses remarkable intrinsic virtues, and may be used as an adjuvant to many other remedies.

"In the treatment of the violent or acute stage of cholera, where there is vomiting, purging and cramps, we resort to anodynes, antispasmodics, stimulants, calomel, &c., internally, aided by sinapisms, stimulating frictions, &c., externally.

"The treatment of the stage of *collapse* is altogether desperate. As before stated, a vast majority of patients die after getting into this condition; and it is no wonder, for the system is then completely drained of its vital fluids. An excessive hemorrhage from a divided artery would not produce a greater prostration than is brought about by the copious serous evacuations of cholera; for all the fluid discharged is abstracted

from the blood. Various remedies are used in this stage, such as sinapisms, blisters, the hot and the cold bath, the hot air bath, calomel, carbonate of ammonia, &c., &c. The most remarkable recovery from collapse that I witnessed, was effected by very large doses of calomel, washed down with *table-spoon ful doses of laudanum*, aided by sinapisms, and frictions with spirits of turpentine and sweet oil. This was a lady, who was rescued from the very jaws of death. She was afterward pretty badly salivated, but recovered without serious injury. Two other physicians attended her with me.

"In the case of Dr. Morgan, mentioned before, I witnessed the astonishing power of *cold water* in bringing about reaction from a hopeless state of collapse. Warmth was restored, the pulse returned at the wrist, and life was prolonged two or three days, but still it failed, for the injury sustained was irreparable. The cold bath was administered in this instance, at the suggestion of my friends Dr. Richardson of Vicksburg, and Dr. Gustine of Natchez, who said they had derived great benefit from it in the cholera of 1833. Being favorably impressed with the power which the remedy displayed in the case of Dr. M., I resorted to it in two other cases of collapse in private practice. It produced reaction, but the both died for want of vital power to sustain it.

"I must apologise for the length to which this communication has unexpectedly been drawn. I have not gone into the minutiæ of the theory and practice, or the pathology of cholera. It is to be hoped that your medical journal will be enriched by some valuable papers on these subjects, especially the pathology of the disease, which has been laboriously investigated by some of our most respectable physicians.

"Before closing I will offer a remark or two on the course to be pursued by persons exposed to the epidemic influence of cholera:

"1. Let them avoid imprudent excesses of all kinds.

"2. Let them not make too sudden and great change in their established habits.

"3. Most persons should avoid fish and oysters; also, acid fruits, and vegetables, with the exception of rice, potatoes and beans.

"4. When feeling weak and slightly indisposed, let them take a little good brandy or wine.

"5. Let them pay prompt attention to the first and slightest premonitory symptoms. Their family physician, or some respectable regular practitioner, will give them the best advice they can obtain, as it is their *interest*, as well as their *duty*, to preserve the lives of their employers.

"When some simple remedy does not quickly arrest the disease, they should send for their physician; they will be apt to do this sooner or later, and it is but right that he should have a fair chance to save them, as his reputation is involved in the result.

"By attending to these simple directions, many may escape the impending danger; whilst, by neglecting them, thousands fall into untimely graves.

"Very respectfully,
"E. D. FENNER.

"New Orleans, *January*, 1849."

Let us proceed with our report:

From this time (28th of January) the cholera subsided to such a degree in the city, that all panic was dispelled. Many who fled at the first alarm now returned, and strangers were no longer deterred from coming to the city. But the disease did not totally disappear—sporadic cases continued to occur throughout the month of February, and the number of deaths from it alone, during this month, amounted to upward of *two hundred*. Affections of the stomach and bowels continued to prevail during this month; amongst which, *dysentry* proved to be the most unmanageable. The month was for the most part very cold—ice was frequently seen, and the ground was frozen upon one or two occasions.

As before stated, when the epidemic first broke out in New Orleans, there was a regular *stampede* amongst the floating population. All who could leave the city, did so without delay. The denizens of the hotels and boarding-houses who were detained a short time, ran about from place to place, as they learned that a case of cholera was near them. There can be no doubt that many who left the city under the influence of the panic, exposed themselves to greater danger than if they had remained where they were and attended to the dictates of prudence and common sense. They had already imbibed the morbific cause, and the exposure unavoidable in traveling produced the disease

under circumstances which rendered it impossible for them to command the best means of relief. Many were attacked after getting hundreds of miles from New Orleans and congratulating themselves on their timely escape from the pestilence. Thus the disease was actually spread in a very short time over a vast area of the south-western country; but it would not take hold of the people, except in *its own time and along its destined course.*

During the week which terminated on the 24th of February, the number of deaths from cholera in the city was reduced down to *four;* but, from this time, the disease began to increase again, and it raged epidemically throughout the month of March, causing about seven hundred deaths—or nearly two-thirds of the entire mortality.

It abated somewhat in April, but still prevailed to a considerable extent, causing about three hundred and sixty deaths, or more than half the entire mortality.

In May, it increased again, causing about four hundred and eighty deaths—fully one-half the entire mortality.

In June, it declined greatly, and almost ceased to attract public attention; yet it caused about two hundred and forty-seven deaths—a little more than one-third the entire mortality.

In July, it almost disappeared, having caused only about twenty deaths. This was a remarkably healthy month.

From a semi-annual statement of mortality, issued by the Board of Health, we learn, that the entire mortality of the city, from January 1st to July 1st, amounted to five thousand four hundred and two; of which the deaths by *cholera* were two thousand six hundred and eight, or nearly one-half.

By a similar statement from the Charity Hospital we learn, that the total number of deaths from all diseases, in this institution, was one thousand four hundred and forty-seven; of which there died of *cholera* nine hundred and sixty-four, or about two-thirds of the whole.

Having completed the second *stadium* in the history of the late epidemic cholera at New Orleans, let us turn back and review some of the prominent facts presented.

It appears that, during the first three months of the epidemic, viz., December, January and February, it caused about one thousand seven hundred and twenty-eight deaths; and, during

the next four months, viz., March, April, May and June, it caused about one thousand seven hundred and ninety deaths.

The general character of the disease in the spring was much the same as it was in the winter. It almost invariably commenced with a diarrhea of more or less severity, generally mild and easily restrained, if taken in time; but, if neglected or maltreated, it seldom failed to lead to the most dangerous, if not fatal, consequences. We have had no reason to change the general directions for the management of cholera, given in our first article, and subsequent experience has fully confirmed the correctness of our remarks on the danger of relying upon the popular nostrums and specifics for cholera. If all the deaths which could be properly charged to these nostrums were fairly brought to the doors of their originators, we should think it would be enough to disturb the composure of the most callous conscience. But it was not *their* lot to witness the too often disastrous consequences of their unholy traffic. *Ours* was the painful task of combating the death-dealing pestilence, into the very jaws of which the poor victims had been deluded by the false representations of the *nostrum venders*. We leave them to the enjoyment of their own reflections and their *ill-gotten lucre*.

In the spring of the year, after the violence of the epidemic had considerably abated, there were several instances in which the disease broke out in special localities with terrible power. There was a boarding house for mechanics on Julia street, where six or seven deaths occurred so suddenly and in such quick succession as to give rise to the *suspicion of poisoning*. An examination, however, did not confirm this suspicion. The cause of death was *cholera*. A similar occurrence took place amongst the officers and crews of several ships at the landing.

On the decline of cholera in June, as in January, there appeared a considerable amount of *dysentery*, which continued throughout the summer and autumn.

Another and a very remarkable affection prevailed during the summer to an extraordinary extent—we allude to *bilious colic*, or, as it has been termed, "*dry belly-ache*." The reader is referred to our special report upon this curious and painful disease, to be found in this volume.

We will proceed with the history of cholera, for much curious information remains to be given.

During the month of August, cholera attracted no attention whatever. But *four deaths* were reported from it by the Board of Health; and, during the second and last weeks, *none at all.*

In September, the Board report but one death by cholera; but, at the last of the month, one or two cases were admitted into the Charity Hospital, and, from this time, the disease began gradually to increase again.

During the month of October, sporadic cases of genuine cholera occurred in various parts of the city and the vicinity. These cases were not confined to recent immigrants. Some of them had been here a considerable time, and some all the year. There were eight deaths from this disease at the Charity Hospital, and the Board of Health report only eight for the month.

We have to record severable remarkable occurrences which took place during this month, having a bearing on the question of the *importation* or *contagion* of cholera. Among the vast number of vessels which arrived here from foreign ports, there were two having a large number of emigrants, which suffered severely from cholera on the voyage. The ship *Cromwell*, from Havre, with two hundred and four steerage passengers, arrived on the 15th of October, having lost twelve or thirteen with cholera; and the ship *Berlin*, from Liverpool, with two hundred and six Scotch and English emigrants, arrived on the 23d, having lost forty-three by cholera. The epidemic appeared to have *run its course* on both these vessels before they reached the mouth of the Mississippi, for they brought no recent cases here; nor did we, on inquiry, hear of any occurring among the passengers while they were detained here on their journey up to the western country. We were in attendance at the Charity Hospital at the time, and found no cases admitted from these ships. The steamer *General Lane* arrived here from Louisville, having had four or five cases of cholera on board after passing Vicksburg. A man suffering from it went from this boat to the Circus street infirmary, where he came near dying. Cases occurred on other steamboats coming down the river about this time.* The facts and circumstances attending these ships and

* We have received an interesting account of cholera on board the steamboat "*Bay State*," kindly furnished us by one of our most respectable merchants, who was a passenger. It was a remarkable instance of the disease breaking out and ceasing on board a traveling vessel.

boats may be found more fully detailed in our article *on the contagion of cholera* (q. v.). Suffice it to say, in this connection, that if cholera be a *contagious* disease, and *this* its *sole* or even *principal method of propagation*, we are at a loss to account for its failing to spread palpably among those who came in contact with these vessels and their passengers. That the constitution of the atmosphere at the time was not inimical to the entertainment of the disease at this place, is evident from the fact, that genuine cases were almost daily occuring in various parts of the city.

In the month of November, cholera increased to quite an alarming degree, giving rise to frightful reports, which spread abroad through the land, magnifying with the distance they traveled. Many physicians now met with cases in private practice. There were sixty-six deaths from cholera at the Charity Hospital in this month. The Board of Health report ninety-three for the city. The general aspect and condition of cholera patients admitted into the Charity Hospital at this time, was just the same as in the winter and spring: but few came before they were in the stage of *collapse;* consequently, very few recovered. Cholera must be treated before it reaches this stage, or the great majority of cases will inevitably prove fatal.

During this month we were again presented with two most remarkable occurrences, similar to those that took place in October. We allude to the arrival of two ships from Liverpool which had suffered severely from cholera on the voyage, but *the disease disappeared before they reached New Orleans.* The following are the facts obtained from the Mayor's office:

Cholera on board the Gipsey.—The British ship *Gipsey*, Capt. Verrell, fifty-three days from Liverpool, with three hundred and nine emigrants, composed of Irish, Scotch and English, arrived at New Orleans on the 26th of November, 1849. The *Gipsey* sailed from Liverpool on the 2d of October. The emigrants were previously examined by a physician and pronounced *all well.* Some cholera was reported at Liverpool when the ship left. On the 23d of October, when the vessel had been out to sea twenty days, the first case of cholera died. On the 24th, four cases died. On the 25th, another died. The vessel was then in latitude 21° 18′, longitude 44° 32′. On the

26th, there were four deaths; 27th, no death; 28th, one death; 29th, two deaths; 30th, no death; November 1st, five deaths; 2d, none; 3d, one death, and *the last from cholera.* The ship was now in latitude 19° 14′, longitude 59° 40′.

The Secretary of the Board of Health, Dr. Hester, examined the vessel on the 26th of November, and obtained the above memoranda from the Captain. He says, in his report to the Mayor: "From the above it will be seen, that the vessel has been free from cholera for more than twenty days. This fact I learn from the log-book and some of the cabin passengers. I examined nearly every one on board, and also all the berths, and not only found all well, but, apparently in the enjoyment of excellent health. * * * The decks of the ship were remarkably clean and neat for an emigrant vessel, and, considering the great number on board, I think the officers are entitled to commendation for their attention to the health of the crew and passengers."

This vessel was landed at the levée, after stopping at Slaughterhouse point, on the opposite side below.

Cholera on board the Fingal.—The British ship *Fingal*, Captain Black, fifty-one days from Liverpool, having had three hundred and twenty Irish emigrants on board, arrived at New Orleans and landed at the upper part of the second muncipality, on the evening of the 27th of November. On the 28th, she was examined by the Secretary of the Board of Health, who reported the following facts to the Mayor:

When the vessel had been out to sea about six days, a child died—disease unknown.

On the 14th of October, a man and woman died with purging and vomiting. The ship was then in latitude 32° 36′ north, longitude 34° west. October 16th, four died of cholera. October 18th, four children and two men died; 19th, two deaths; 20th, two deaths; 21st, two women; 22d, five deaths; 14th, three deaths; 25th, one death; 26th, three deaths; 28th, one death; November 2d two deaths; 8th, one death, and *the last.* The vessel was now in latitude 19° 2′ north, longitude 60° 50′ west. Total, thirty-seven deaths.

Dr. Hester, the Secretary, says, in his report: "I found three sick on board, apparently laboring under ship fever. I am

not prepared to say, what number of the above died of cholera; some, I think, died of this disease and some of ship fever. The vessel was very filthy and foul in every part examined. She was ordered to 'the Point,' below the city, there to remain until thoroughly purified."

The disease continued throughout the month of December, but to so limited an extent as to attract but little attention. There were sixty deaths from it at the Charity Hospital, and one hundred and eleven reported from all the cemeteries, including these.

The general aspect of the weather during the month was very much like that of the December previous, when cholera broke out in New Orleans. This was a common remark among the citizens. It was very warm and damp, and the streets were very muddy, but in none of these respects was the condition of things quite as bad as it was in December, 1848.

During this month, too, many persons complained of uneasiness in the stomach and bowels, similar to that which was so generally experienced twelve months before. Cases of dysentery and diarrhea were by no means uncommon; but the general health was so good that the physicians of the the city hardly ever had so little to do in private practice.

And here we may draw another parallel between the cholera of this period and the twelve months previous. The question has often been discussed, whether we should have had the epidemic of December, 1848, *without the arrival of the Swanton and other ships from Europe.* Dr. Hort, Dr. Hester and myself, whose writings on the subject are before the profession, have inclined to the opinion, that *we should.* The recent facts just narrated, together with all that has been observed here since cholera has prevailed, appear to support this opinion. But we have now before us a train of circumstances, connected with the state of the weather, the condition of the streets, &c., very much like that presented in December last, yet *no epidemic.* Now, if the disease was neither imported in the persons of the sick, nor originated in the condition of the locality, how are we to account for its appearance amongst us? *Here lies the rub.* All we shall attempt to do in this place, is to give as many of the facts and attendant circumstances as we have been able to ascertain.

Our readers can theorize upon them as well as ourselves. In our article on the *contagion of cholera*, we have expressed our views; but they will, doubtless, be considered of much less value than our facts.

By reference to the reports of the orphan asyl ms and prisons of New Orleans, obligingly furnished by the attending physicians, it will be seen that cholera prevailed in only one asylum, (the Poydras Female,) and there only after the epidemic had completely subsided in the city, (see Dr. Rhode's report.) The exemption of the inmates of prisons and asylums from epidemics of yellow fever, is a remarkable, but well established fact.

The cholera still lingers among us, with occasional outbreaks of increased violence, and will probably continue to do so for an indefinite period. In like manner, it is still to be seen among the sugar plantations along the river and bayous of Lower Louisiana.

We have now brought our history of the disease down to the end of the year, and, after a few remarks in relation to the *treatment*, we will close our report.

Treatment of Cholera.

So various and extensive has been the range of remedies applied to the treatment of cholera, that we have not the vanity to presume we can offer anything new on the subject. Indeed, we do not know that we ought to attempt anything more than what we did in our first article, which was to point out the indications and the principal remedies to be relied on. It is somewhat remarkable, that, amidst the multiplicity of remedial agents that have been employed, the profession, both in Europe and America, have pretty generally agreed upon a *few* which constitute the main dependence: these are *opium*, *calomel*, *camphor*, *capsicum*, *acetate of lead*, *mustard* and *brandy*, with their various modifications, combinations and doses. The search for a *specific for cholera in all its stages* would be as vain as that of the ancient alchemists for the philsopher's stone, or any of the visionary enterprises of the knight of La Mancha. It is a *humbug* resorted to alone by designing charlatans who would batten on the ignorance and credulity of the people.

We are not among those who admit they *know nothing about*

cholera or its remedies. On the contrary, we contend that the profession knows a great deal about both. We do not know what the *remote cause* of cholera is; neither do we know what are the *remote causes* of fever, dysentery or measles, &c.; but we are well acquainted with the *effects* of all these causes. We know how cholera attacks people, how the disease progresses in its destructive march, how it terminates in convalescence or death; and, also, what remedies will cure the great majority of cases, if applied judiciously and at the proper time. Is all this knowledge worth nothing? If so, we had as well confess our ignorance of all diseases, and, with folded arms, resign ourselves and the community to *inexorable fate!* But it is not so. Our Omnipotent and Merciful Creator has not left us in this helpless and powerless state. He has endowed us with the capacity to know our well-being and to protect and defend ourselves against the dangers and calamities to which we are ever exposed. If we do not exercise due vigilance and discretion, we must abide the consequences. There can be but little doubt that at least *eight-tenths of the victims of cholera in New Orleans have died unnecessarily;* i. e., they have been lost on account of their neglect of the plainest dictates of prudence and common sense. Ought this to be charged to the discredit of the medical faculty? Or ought we to confess that so many people have died of cholera because we did not know how to treat the disease? Certainly not. We do know how to treat it; and as the best evidence of the fact, we have seldom failed to cure our patients, if called in before they are *beyond the curable stage.* We had as well be expected to *raise the dead* as to cure patients in *articulo mortis.* As before observed, there are instances in which the patient is a *doomed victim* from the moment he is openly attacked. The disease had been so insidious in its approaches, that before the sentinels of the system gave the alarm, the enemy had taken the citadel and all was lost. The human system is organized in such a manner as to admit of very extensive derangement and injury, and yet be capable of restoration to health. But there are *limits* which cannot be transcended with safety. It is impossible for us *always* to determine when this has taken place. Fatal injury may be done to a vital part, accompaned with only trival complaint; while, in other instances, we see persons recover from the most hopeless conditions. We should therefore never abandon our patients, especially in acute diseases, while life remains; but at

the same time, it is unjust to reproach us for *failing to cure*, when we have not been applied to until the disease had progressed beyond the *curable* stage. When a person has had an attack of cholera and neglected it till he is in a state of *collapse*—cold, pulseless and exhausted—the *prognosis is decidedly unfavorable:* the most reasonable expectation is that he will die. But this does not always take place; nor is every such patient entirely beyond the reach of our remedies. Some think that when a person recovers from such a condition, it is more justly attributable to the energies of the constitution:—the *vis medicatrix naturæ*—than to any remedial agents that may have been used. In this opinion we cannot fully concur. We will not deny that persons have recovered from the most hopeless stages of cholera, for whom *nothing at all was done;* but we have certainly known similar cases to recover, in which the effects of remedies and professional attentions were *so palpable* as to justly entitle them to the merit of the cure All cases of collapse are not equally curable. We are still of the opinion expressed in our first article, that the prognosis is most favorable in those cases in which it occurs *earliest*—when the system has not been excessively depleted; always excepting those *terrific cases* in which the vital powers are completely overwhelmed at *the onset*, and the sufferer succumbs *without either vomiting or purging*. We might almost as well be expected to save a man who had been stricken down by lightning, or whose head had been knocked off by a cannon ball, as one of these cases.

The treatment of the *collapse* of cholera, and the stage *verging on collapse*, is the most important and interesting to the profession; for this is the stage which we are most frequently called upon to treat, and that in which our skill and the efficacy of our remedies are most fully tested. Any body could treat the early or premonitory stages of such an epidemic of cholera as we have lately had in New Orleans. A two ounce vial of paregoric, judiciously used, was doubtless worth more than any *nostrum* sold in our city. But these remarks would not be applicable to the more malignant epidemic which reigned here in 1832, and recently on some of the plantations in Louisiana. By reference to Dr. Booth's report in this volume, it will be seen that but few cases were saved, on Bishop Polk's place, after having had *three evacuations*. We treated the early stage here by anodynes and astringents, sometimes combined with a little calomel or blue

mass. The physicians of New Orleans cheerfully instructed all who applyed to them as to how they should act; and those who were prudent and careful provided themselves with some simple remedy which generally answered every purpose. When it did not, they sent for their physician in good time and were easily cured. Those who neglected all precaution, or relied implicitly upon the extravagant pretensions of the *nostrums* and popular *specifics*, (and their name is legion,) generally got themselves into a dangerous, if not hopeless state, before they sent for a physician.

The remarks which we are now about to make, relate to the treatment of decided and well marked cases of cholera, *both before and after the stage of collapse.* They must necessarily be confined to our own ideas of the proper management; for it would be impossible for any one physician to represent fairly the opinions and practice of others. In matters of this kind, presenting so great a variety of attendant circumstances, it is almost impossible to commnnicate our own views by writing.

We are called to a man laboring under a rapid and exhausting diarrhea—his evacuations are frequent, copious, and resembling rice-water, he has more or less vomiting and cramps —his skin is cool and shriveled on the extremities, with or without sweat—his countenance is sunken and haggard—his pulse is small and weak, but not very frequent—respiration slow and easy—thirst distressing—voice feeble, and becoming husky. Now, what are the indications in the management of such a case? We conceive them to be—1st, to arrest the exhausting discharges as soon as possible, and to change their character from thin, white and watery, to dark and consistent; 2nd, to sustain the sinking powers of the constitution; 3d, to relieve the suffering, if there be any; and, 4th, to increase and equalize the excitement of the system. With these indications before our mind, we endeavor to unite our remedies in such a manner as to address them all at once. With this view, we give a combination of calomel, opium, camphor and capsicum, by the mouth; and enemata of the acetate of lead and laudanum. At the same time we apply sinapisms to the epigastrium and extremities, and use stimulating frictions upon the surface; also, external warmth. We also frequently give a mixture of spirits camphor, spirits lavender, comp., and tincture of opium,

as occasion may require, to assist the above combination. We allow ice-water by the tea-spoonful to relieve thirst; also, some aromatic infusion more freely, such as cinnamon, clove or nutmeg. If the stomach be very irritable, we prefer giving twenty or thirty grains of calomel with half a grain of sulph. morphiæ at one dose, and repeat, if necessary.

Now let us mark the result. If our patient gets better, (as they generally do, if not too far gone before the treatment is commenced,) you will find the diarrhea to stop, the extremities to become warm, the pulse to rise, and sleep to follow. After the lapse of twenty-four hours the bowels must be moved by the gentlest means; and now you find the evacuations, after the first stool, to be small, dark and consistent. From this time convalescence is established, and the patient is soon restored to health. If the remedies fail to have the desired effect, the patient will continue to sink—the evacuations become almost incessant—the pulse becomes extinct—the voice reduced to a whisper—the surface as cold as marble, and death closes the scene. This is by no means the *only* plan of treatment we adopted—*it is one out of a variety;* for we hold it to be altogether impossible to lay down a course which will be suitable for all cases.

But how shall we treat the stage of collapse? We have really as yet seen so few recover from this stage, that we cannot recommend any remedies with much confidence. We conceive the indications to be, to check the bowels—to re-establish the important functions of the liver and kidneys—to stimulate the powers of life, and to get nourishment into the exhausted body. To accomplish these objects, we rely upon the following remedies, which are to be administered, *pro re nata*, viz: calomel, opium, camphor, acetate of lead, creosote, quinine, brandy or port wine, blisters, beef tea, &c.; but, as has just been said, not with much hope of success. We have seen cases recover under the use of *some* or *all* of these remedies, also without the aid of any one of them; but we have known many to die *in spite of them all.*

As calomel and opium are certainly the two most conspicuous remedies in the treatment of cholera, and have called forth the greatest amount of discussion, and the most contra-

dictory opinions, as to their merits, we shall give them particular notice.

In an article which we published in the New Orleans Medical and Surgical Journal, we spoke favorably of calomel in large doses, i. e., from twenty to thirty grains. We still entertain the same opinion of the power of this remedy to bring about reaction in some of the most desperate cases, when given in this way, or still more freely. We never prescribed a hundred grains of calomel at one dose to but one man, and then only in the most desperate state. Reaction took place, the pulse and warmth were restored, but he subsequently died. We have recently had occasion to witness the results of a very different practice. Having seen accounts of the plan proposed by Dr. Ayre, of England, of giving one or two grains of calomel every five or ten minutes, we tried it in eight or ten cases, and have been rather pleased with the results. There are now in our ward, at the Charity Hospital, (12th January,) two convalescents who were rescued from a complete state of collapse by this plan of treatment. Each of them took nearly one hundred grains of calomel. One of them was slightly paralyzed, the other not. The former had but moderate consecutive fever, the latter had a severe fever of typhous form, with hemorrhage from the nose, and required to be cupped and blistered to relieve the brain. This case wound up with a carbuncle on the shoulder blade, and a number of boils on the neck and extremities. We should not omit that the small doses of calomel failed to restore the other cases to which we prescribed it in the hospital. Nor was calomel the only medicine given to the cases which were restored. Still, we think the effects of it were palpable and beneficial.

Although calomel has been so generally used in cholera, both in Europe and America, there has ever existed much difference of opinion respecting its *methodus medendi* and its proper doses. Some think that its virtues depend entirely upon its action on the liver, whilst others attribute its chief benefit to its action on the gastro-intestinal mucous membrane. The former most generally advocate the use of large doses, though many who entertain the same views, prefer the small and oft-repeated doses. From the facts presented in the course of a

case of cholera, it appears to us that the benefit derived from calomel must proceed chiefly from its action on the liver. Let us briefly review them. A patient is found vomiting and purging a whitish fluid, which is exhausting him almost as rapidly as if it were so much blood. We *presume* there is a total absence of bile in the discharges, because they present none of its characteristics; and to show the correctness of this conclusion, if the patient die, and we open the body, not the least appearance of bile is discovered in the whole tract of the intestinal canal. But this patient is not to die. We give him calomel, either alone, or in combination with such anodynes and astringents as we think will cause it to be retained till it can have time to act, (saying nothing now of other benefits derived from these combinations.) Well, the patient is observed to improve—the vomiting and purging gradually cease—his pulse rises—he becomes warm and comfortable, and goes to sleep. He is kept quiet for twelve or twenty-four hours, and then we order his bowels to be gently moved. *Now* his evacuations are found to be altogether different. Instead of rice-water, he passes dark, thick and bilious looking matters—these become gradually of a brighter yellow color, and our patient is soon restored to health. Who that is familiar with cholera and its treatment, has not often witnessed these phenomena? And who has seen many cases recover without witnessing them? If the calomel fail to take effect, we see no change in the evacuations—no restoration of biliary secretion. If the phenomena just cited do not afford conclusive evidence of the action of calomel on the liver, we are altogether wrong in our ideas, and would gladly be enlightened. It may be contended by some, that the presence of bile in the *gall-bladder*, so generally observed after death, affords conclusive evidence that the function of the liver had not been suspended. But in this view we cannot concur. In the physiological state, the gall-bladder is a mere *reservoir for the reception of superfluous bile*, and is generally found more or less distended with it. We can, therefore, readily conceive that the function of the liver may be suddenly arrested, and remain so until death, yet an abundance of bile be found in the gall-bladder, secreted long previous. If the function of the liver be not arrested in chol-

era cases, what becomes of the enormous quantity of bile, supposed by physiologists to be secreted daily by adults, viz., from seventeen to twenty-four ounces? The gall-bladder and biliary ducts could not contain it, and it must necessarily have vent in some way. If conveyed into the intestinal canal, its appropriate stain would be certainly visible in its contents or on its lining membrane. Such a thing as *colorless bile* we believe is unknown to physiologists or pathologists; and it is generally admitted that when the biliary ducts are obstructed so as to prevent the flow of bile into the alimentary canal, the fœcal evacuations at once become *whitish* or *clay-colored.* We are aware of the fact that vastly the greater part of the secreted bile is re-absorbed and goes back into the system for physiological purposes; but the residue never fails to indicate its presence by its peculiar stain upon every thing it touches. We therefore conclude, that when the evacuations are colorless, and there is no stain upon the contents and lining membrane of the intestinal canal, the secretion of bile has been arrested or its discharge obstructed.

We need not speak of the comparatively few cases attended with bilious vomiting from beginning to end; nor would we be understood to say, that every patient whose biliary secretion is restored after suspension, ought *necessarily* to get well. The *onus* of diseased action sometimes falls upon the liver, and the patient will die after throwing up incredible quantities of bile.

Fatal lesion, either functional or organic, may take place in some other organ, as the brain, after the function of the liver has been restored. We are inclined to think this often proceeds from the injudicious use of opium. As to the best method of administering calomel with a view to its action on the liver, there exists much difference of opinion. It certainly does not follow, because small and oft-repeated doses frequently have the happiest effect, that large ones are altogether unnecessary; nor, on the other hand, because very large doses sometimes effect astonishing cures, that it is altogether vain to rely upon very small ones. There is a *proper method* for each case that is *curable;* and this must be determined by the judgment of the practitioner. We shall not attempt to settle the

question. All we can do is to give our experience and the impressions made upon our own minds.

Opium has called forth almost as much diversity of opinion as calomel. Some give it in very large doses, others very moderately; whilst some abjure it altogether. Our last remark about calomel is equally applicable to opium. It is an invaluable remedy for cholera, and is equally applicable, in some manner, to almost every case; but this must be determined by the judgment of the practioner. Like all powerful agents, it is potent for *evil* as well as *good;* and if given in decisive doses, it will do either one or the other. We would not give it in large doses except in the earlier stages, or at least previous to collapse.

After all, how vain is it for any *one man* to attempt to instruct the world how to treat *cholera*. Unless one should travel with it in its devious course from the banks of the Ganges to the inmost recesses of America, and see its effects upon all nations, in all places, at all seasons and different periods, he would be incompetent to the task; for the disease is modified by all these circumstances, albeit it retains its general identity throughout. Then what better can be done than what is attempted in this work; that is, to collect the observations, experience, and reflections of physicians residing in different localities, and by adding them together, endeavor to form a magazine of useful knowledge in reference to the subject.

The fever that follows the stage of collapse when reaction takes place, is very much like *typhus*. The treatment most satisfactory to us has been by the infusion of cinchona and serpentaria, emolient poultices to the abdomen, and sponging the body with vinegar and water. We have sometimes had to order cups to the mastoids for the purpose of relieving the brain.

Premedication and Prophylaxis.

An experienced and distinguished practitioner of our city, Dr. Cartwright, has recently called the attention of the profession to the importance of *premedication* during the prevalence of epidemic cholera. The object of premedication, as

the term implies, is to ward off or prevent an attack by the administration of remedies *before* the patient is taken sick, but when he is presumed to be under the full influence of the morbific cause. The subject, cholera, was elaborately discussed by the learned author in a pamphlet which he published; but if we are not mistaken, the views he set forth respecting premedication, did not meet the general concurrence of the profession. Indeed, in our own humble opinion, the propriety of such a course would be *very questionable.* We are inclined to think that when the human system is exposed to the influence of deleterious agents, the less it is disturbed, the better; as hardly any medicine can be administered in a state of health without producing more or less disturbance. Remedies are alone applicable to *disease*, and can only be indicated by *symptoms: Ergo*, if there be no evidences of disease, we have nothing to treat. If we knew any specific *antidote* to the *cause* of cholera, it might well be resorted to when the epidemic rages, unless it were equally dangerous; but in the absence of such knowledge, it appears to us that we had better wait at least for the *premonitions* of disease. We believe the best prophylactic or preventive course to consist in regular, uniform habits, agreeable occupation and temperate but generous living. The only instance in which we ever recommended any thing like premedication, was to Bishop Polk. Happening to visit his beautiful and extensive plantation on the Bayou Lafourche, in the midst of the terrible epidemic which scourged it so severely in the spring, and finding the disease so rapid and uncontrollable in its progress after the attack was made, we suggested to him the propriety of giving to all the negroes who were yet well, small doses of a mixture composed of quinine, comp. tincture of capsicum and laudanum; at the same time confessing that we had no experience to refer to respecting such a course. We learned subsequently that the Bishop tried it; but that it probably did more harm than good; often causing a disturbance of the stomach which led directly to an attack of cholera.

Dr. Kitridge, a planter, who lives on the same bayou, tried a course of pre-medication, consisting of alterative doses of calomel. During the first outbreak of cholera on his place,

he thought it beneficial, but he subsequently changed his opinion. His report will be given. Dr. Magoun, of Natchez, also resorted to a prophylactic course, consisting of charcoal and sulphur, with which he was much pleased. See his report. The reports of Dr. C. H. Stone of Natchez, Dr. Shanks of Memphis, Dr. Booth, of Lafourche, and Surgeons Wright and Jarvis, of the United States Army, in Texas, which are to follow in their proper places, contain many interesting facts relative to the various questions which have been raised concerning the cause, nature and propagation of cholera. We invite attention also to the reports on the Orphan Asylums of New Orleans and Lafayette, by Drs. Rhodes, Carey, and Sunderland, and the letter of Dr. Gilpin, of Covington, on the other side of the lake.

In connection with this report we had intended to give a paper which we read before the Physico-Medical Society of New Orleans, *on the contagion of cholera*, with the discussion that followed; but finding we have already so much on cholera in this volume and fearful of wearying the reader, we have concluded to omit it. It may not be improper, however, to state the position we took on this question, which was sustained by the society. It was that although there are on record, some well authenticated and apparently indubitable instances in which cholera was conveyed and communicated from person to person, yet this is neither its *only* nor its *principal method* of extension. Morever, that the knowledge of this limited contagiousness is of no *practical value or importance;* since it has been found impossible to arrest the progress of the disease by the strictest quarantine and sanitary cordons. We believe that the cause of the disease is as yet unknown, and no hypothesis that has been promulgated can account satisfactorily for all the phenomena which have been observed.

During this discussion, Dr. Stone threw out a suggestion which excited considerable surprise: he said he was strongly inclined to believe that *cholera is a specific disease that does not attack the same individual more than once.* This called forth a general expression of opinion among the members of the society, which proved to be decidedly opposed to the suggestion of Dr. Stone.

During the prevalence of cholera, a number of post mortem examinations, were made at the Charity Hospital, but we are not aware that anything was discovered differing from what has been recorded in other parts of the world. The instances of *black vomit* in cholera patients were somewhat singular. They probably had some connection with the yellow fever which had prevailed just previous.

The mortality from cholera in New Orleans this year, may be seen by reference to the Board of Health. It would appear that this epidemic has not been near so severe as that which prevailed in New Orleans in 1832-3, nor as it recently appeared in some of our western cities. It is melancholy to reflect upon what a waste of human life there has been in New Orleans, from a disease so easily managed when taken in time, and treated properly. In our next volume we shall give an account of the progress of the disease, as its still lingers amongst us.

REPORTS FROM LOUISIANA.

ARTICLE VIII.—SPECIAL REPORT ON THE EPIDEMIC COLIC, WHICH PREVAILED IN THE CITY OF NEW ORLEANS, DURING THE SUMMER OF 1849. BY THE EDITOR.

A DISEASE under the name of *colic* has been familiarly known since the earliest records of medicine. Simple *flatulent colic* and *infantile colic* may occur at all seasons and in all countries; but a more serious form of this disease has been known to prevail epidemically in certain localities and climates, and at particular seasons of the year, and has been described under the various titles of *bilious colic*, *dry bellyache*, *colica pictonum*, *colic of Madrid*, *Devonshire colic*, *lead colic*, &c. Since the days of Galen and Celsus, *lead* has been known to be poisonous to the human system, causing violent pain in the abdomen, attended by bilious vomiting and obstinate costiveness,

and often followed by paralysis of the extremities. It is a remarkable fact that where colic has prevailed epidemically, whether in the West Indies or Europe, it has presented precisely the same symptoms and often the same consequences. Hence, Dr. Watson and some other standard authorities, assert that the last named forms of colic, do not differ from each other in any material respect, and have a common remote cause, viz., *lead*. Some of the older writers, as well as the more modern, however, have entertained a different opinion. Dr. John Bell, (*Bell & Stokes' practice,*) under the head of "*Dry Bellyache,*" says, "The disease designated variously as *dry bellyache*, *Madrid colic*, the colic of Poitou, *Devonshire colic*, and *vegetable colic*, is analogous to our bilious colic. For a long time attributed to the action of lead, to acid wines or cider, or the spirits drunk by the inhabitants, or to milk used in too great abundance, and other errors of regimen, it is now admitted generally to be induced by great atmospherical vicissitudes, the operation of which is favored by improper food, and probably some causes of an endemial nature which cannot be well appreciated." This disease, as it appeared in the West Indies, was well described by Hillary, Musgrave, Hunter, Chisolm and others, the most of whom attributed it to atmospheric vicissitudes, and not to lead; saying, moreover, that it preceded remittent bilious fevers, and probably arose from the same cause. Among the last named authors, John Hunter, a surgeon to the British Army in Jamaica, maintains the *lead theory* with great ability. His paper may be found in *the 12th volume of Duncan's Medical Commentaries for* 1787. Dr. Hunter observed that the disease prevailed at some particular times and not at others, and that it often terminated in palsy. These times corresponded with the most common use of *new rum*. From seeing the disease to be exactly like *lead-colix*, he began to search for the lead, and soon detected it most palpably in the new rum. This fluid must have absorbed it from the *leaden still-worms* in the process of distillation. It was abundant in the *new rum*, but hardly to be detected in the *old;* hence, he concluded, the lead was precipitated in the course of time. The time requisite for the deposit to take place, was not exactly ascertained, but according to the general opinion of the in-

habitants, at least one year, was necessary. Old rum seldom or never caused the disease. Dr. Hunter suggests that a little sulphuric acid be added to rum, as soon as it is distilled; but gives no results of such an experiment. He says, the physicians of the island attributed the disease to *bad water*, *acid fruits*, *bile*, &c.; but proves that these opinions are erroneous.

In the first volume of the *Medical Transactions of the College of Physicians*, *London*, 1768, may be found four papers read before the College, by Sir George Baker, the whole constituting a learned and philosophical disquisition upon the poisonous properties of lead and the epidemic colic of Devonshire. This county in England is famous for the great quantity of cider it produces, but more so, for the prevalence amongst its inhabitants, of a terrible colic. Dr. Baker proves conclusively that this colic is caused by lead used in the preparation of the cider to prevent its fermentation. He gives an interesting sketch of the history of lead since its first introduction into the materia medica—says it has been used ever since the introduction of fermented wines and ciders, and he has but little doubt that wherever colic prevails to a great extent, it might be traced to lead introduced in some way into the system. By numerous and carefully conducted experiments he proved that lead abounded in the cider of Devonshire at his day. In confirmation of his views, Dr. Baker takes occasion to introduce the testimony of our philosopher Franklin, in the following manner:

"My suspicions concerning this subject have been greatly confirmed by the authority of Dr. Franklin of Philadelphia. That gentleman informs me that, at Boston, about forty years ago, leaden worms were used for the distillation of rum. In consequence thereof, such violent disorders were complained of by the drinkers of new rum, that the government found it expedient to enact a law forbidding the use of any worms, except such only as were made of pure block-tin. This law having been enacted, the dry colic was much less frequently heard of than before. But the law was complied with only in part; for from that time to the present, instead of block-tin, they have used a pewter, containing a large proportion of lead. Dr. Franklin likewise informed me, th t the colic of Poitou is not so frequent a disease in any of the colonies, as it was formerly;

and that the reason commonly assigned is, that the people now drink their punch very weak in comparison with what they were formly accustomed to, which used to be rum and water in equal quantities. He added, that they now also drink their punch with more juice of fresh limes in it ; and, as that juice, joined to certain laxative medicines, is at present their common remedy when any are seized with the disease, so it is generally considered as the best preservative against it."

Dr. Hillary* gives an excellent description of this disease as he witnessed it in the West Indies. Although he mentions amongst its causes, "*the immoderate use of spirituous liquors, especially such as are fiery and new*," yet he does not seem to entertain the suspicion that these produce the colic by means of the lead which they contain. This appears somewhat strange, after the interesting experiments of Sir George Baker and John Hunter, then so long before the profession. Hillary knew the disease to be followed by paralysis, and in long continued cases, to be accompanied by pains in the large joints. He also speaks of metastasis to the brain, causing stupor and delirium, convulsions and death.

Dr. Rush, in his notes to Hillary, says of the *dry-gripes*—"It was a common disease in Philadelphia, between the years 1760 and 1770. It is now seldom to be met with except in painters. Its rare occurrence has been ascribed to the disuse of punch and of late and heavy suppers, to the use of flannel next to the skin, and to the abolition of porches, which afforded a temptation to our citizens to expose themselves for several hours, in a state of inactivity, to the damp evening air."

Professor Chapman, of Philadelphia, says—the symptoms, indications and treatment of Bilious and Lead Colic are pretty much the same. Among the causes of bilious colic, he mentions "*the causes of autumnal fever; irritating ingesta, and epidemic influence.*"† He says—"it should be treated as a febrile affection attended with intestinal spasm or phlogosis, and hepatic and other congestions."

* Observations on the changes of the air and the concomitant epidemical diseases in the Island of Barbadoes, &c. with Notes by Benj. Rush, M. D. Philadelphia : 1811.

† Compendium of Practice. By Benedict.

Professor Dickson, of New York, late of Charleston, says—

"It (Bilious Colic) occurs during the summer and autumnal months, affects persons of bilious habit of body, and such as are liable to hepatic disorder, and is attributed to malaria." * * "Many writers have traced its close analogy with our autumnal remittents. It arises under the same circumstances, follows similar exposure, is sometimes ushered in with a febrile chill, and is frequently attended throughout, with the familiar symptoms of this type of fever, &c." (Dickson's Practice.)

I deem it useless to extend these quotations any farther. Enough has been elicited to show, 1. that colic has been known to prevail epidemically in certain localities differing in climate, and most commonly during the warm seasons. 2. That severe bilious and lead colic present the same symptoms and require the same treatment; and 3. That although lead introduced into the system will unquestionably produce the colic, it has been the opinion of able and experienced physicians that the disease may likewise originate from other causes, such as atmospheric vicissitudes, malaria and the like.

We will now come down to our own time and endeavor to give some account of the bilious colic or colica pictonum, as it has been witnessed in New Orleans, especially during the year 1849.

On inquiry we learn, from some of the older practioners of the city, that they have generally seen the complaint here every summer, and upon one or two occasions within the last twenty years, they have known it to prevail to what might be termed an epidemic extent. On looking over the books of the Charity Hospital, we found that cases of *bilious colic* and *colica pictonum*, have been admitted every summer; but it is certain that there has been much more of the disease this year than has been observed since 1841, when we came here to live.

The first notice we had of the complaint this year, was in a verbal communication made to the Physico-Medical Society, by the President, Dr. Thomas Hunt. At the regular meetings of this Society every member present is called on to state what diseases he has met with and any thing of interest he may have to communicate. At the meeting about the first of July, Dr. Hunt stated that he had recently met with several cases of

severe colic, so much like *lead-colic*, that suspicion was awakened; but on inquiry, no lead whatever could be traced. No other member had witnessed anything of the kind at that time. We heard nothing more of its till the 7th of August, when the writer was called to attend two cases in one family, and on the following day, another severe case We now made inquiries at the Charity Hospital and of all the physicians we met, and found that the complaint had become quite common. We observed as many as five or six cases at one time, in the Charity Hospital. We now recurred to the interesting letters of Drs. Ashbel Smith and J. S. Bowers, published in the May number 1849, of the New Orleans Medical and Surgical Journal, and soon became convinced that we were having the same disease as that so well described by those respectable physicians, at Galveston and Brasos Santiago, under the title of "*Constipated colic or patent dry bellyache.*"*—The symptoms of our complaint corresponded precisely with theirs, as they did also with those given of the dry bellyache of the West Indies, the colic of Poitou and of Devonshire, with this marked difference, *i. e.* we have known of no instance in which our colic was followed by *paralysis.*

This colic prevailed in New Orleans during the months of July, August and September; chiefly amongst the laboring class of whites; but to some extent amongst negroes. It occurred during a remarkably healthy season; though, in the time above mentioned, were to be seen cases of intermittent, remittent, typhoid and yellow fever, dysentery and diarrhea. But these also were confined pretty much to the same classes, as shown by the records of the Charity Hospital. During the three months specified, the number admitted into this hospital was very great, whilst there was but little doing in private practice.

The prominent symptoms of the complaint, were a constant and severe griping pain in the abdomen, attended with but little tenderness and no fulness, eructations, vomiting of bile, and obstinate costiveness. The cases which I shall presently

* If the Texans have taken out a *patent* for this interesting complaint, we wish they would keep it within their own confines. We would most cheerfully dispense with it in New Orleans.

detail, will give a correct idea of the minute and particular symptoms. Whatever may have been the cause of the complaint, it did not precede any epidemic here, as it did at Brasos Santiago. We would invite special attention to the letters of Drs. Smith and Bowers, which will either be appended to this report or inserted in another part of this volume. We reverted to these papers as soon as we met with the complaint, and soon realized the great value of *bloodletting*, so distinctly pointed out by Dr. Bowers. Judging from the general aspect of the patients and the symptoms presented, this remedy would certainly not appear to be strongly indicated; but experience, not according to Dr. Bowers alone, but many of the older writers, has proven it to be almost indispensable.

At the monthly meeting of the Physico-Medical Society, on the 1st of September, the prevailing colic was the chief topic of discussion. Professors Stone and Hunt had seen a number of cases, and other members had seen more or less of it. Professor Stone had known it to be epidemic here before. He believed printers were almost as liable to colic as painters. He had known ale-bottlers to have it without having anything to do with leaden pipes. Both he and Professor Hunt looked upon the disease as a *neuralgic affection*, sometimes attended with great engorgement and even hemorrhage of the intestines, but seldom or never with inflammation. They also agreed upon the general plan of treatment—placing great reliance upon anodynes and bloodletting, and opposing the use of drastic purgatives. Both of these gentlemen spoke favorably of calomel to the extent of salivation, and said they had often seen the colic yield as soon as ptyalism was established. Rush and others had noticed the same thing long before; but we are inclined to doubt whether there be any specific virtue in the mercury, for we witnessed one severe *relapse* whilst the patient was still suffering under ptyalism, established during a previous attack; and the last cases we treated, did just as well without calomel. Dr. Stone said he had seen rheumatic pains accompany the colic, and had found benefit from the use of the iodide of potass and colchicum; also from the sulphate of quinine and citrate of iron. We can confirm these observations.

We saw several violent cases of relapse after the patients

had convalesced from severe attacks. They required as active treatment as in the first instance. No relapse occurred after we put the patient under the iodide of potass and wine of colchicum. This was kept up for a week or ten days and appeared to confirm the convalscence.

The treatment of severe colic has been well establish ever since the time of the immortal Sydenham. That great physician laid down the proper principles for its management; and Hillary, Rush, John Bell, and many other modern authors have acknowledged their obligations to him. These principles are first, by means of decisive anodynes, bloodletting, warm baths, &c., to allay the pain, spasms, &c.; and secondly, to move the bowels by as gentle means as will answer the purpose. If mild cathartics will not not do it, the more powerful must be resorted to. Notwithstanding the length of time that these valuable rules have been before the profession, we still find injudicious physicians resorting to drastic purgatives at the outset, with the view to remove intestinal obstruction before giving anodynes, under the fear that the latter would augment the costiveness. Extensive experience has long since established the fact that decisive anodynes and bloodletting by cups or the lancet, are the most valuable agents for overcoming the chief obstacles to the action of cathartics. It is quite common in this city to give as much as three grains of opium and fifteen of calomel at one dose, and five or six hours afterwards, follow it with a cathartic of castor oil and spirits turpentine, or croton oil, or some saline, to be aided by cathartic enemata. The pain often continued and called for the repetition of anodynes after the bowels had been freely evacuated. Blisters to the abdomen were generally used. I will now report some cases which were carefully noted at the time and give a better idea both of the disease and the treatment.

Case 1. A white woman, aged about thirty, has lived in New Orleans several years and had yellow fever. I was called to see her in the evening, Aug. 7th, and found her suffering great pain in the epigastric, umbilical and left iliac regions. The abdomen was soft and flaccid, with some tenderness under pressure, especially in the epigastrium, in the lower part of

which she directed my attention to a tumour which could be distinctly felt, apparently the size of the fist. She was constantly vomitting green bile, and between the nausea and pain, she appeared to be perfectly wretched—she looked pale and haggard, and said she had rather die than endure such suffering—the skin rather cool and moist; pulse frequent, small and weak; tongue furred and moist; but little thirst, bowels constipated, urine scanty, some uneasiness in the back, but none in the head. She was constantly tossing herself; frequently turning over upon the stomach and pressing it, as persons are wont to do with colic. She said she had not slept two hours in the last two days. She had troublesome hiccup.

Previous history. She had been attacked with the pain, vomiting, &c., about fifteen days ago, and been attended by three different physicians, the last of whom had left the city, and thus the case fell under my care. From what I could learn, she had used purgatives, anodynes, sinapisms, &c. She said she had been freely purged on several occasions, but it only afforded temporary relief. One night the agony was so great that she says she took of her own accord, *a table spoonful of laudanum twice.* She says she was so completely *benumbed* by this, that she was only kept alive by constant stimulating frictions. Nevertheless, after the effects of the laudanum wore off the old colic pain returned. A few days before I saw her, however, she had gotten so much better, that she ventured to ride down to the lake, where she ate imprudently, and relapsed to the condition in which I found her.

Treatment. Being the first case of the disease I had met with, and finding her pale and prostrate. I was afraid to abstract blood. I ordered dry cups to be applied over the entire abdomen; afterwards a sinapised poultice and hot mustard footbath. Also the following:

℞ calomel ℈ i.
Sulph. quin. grs. xv.
Sulph. morph. gr. i. M. ft. pil. No. 8.
S. Take two pills every three hours.

℞ Sod. Bicarb. ʒss.
Morph. Sulph. gr. i.
Aquæ flor. aurantii ʒ ii. M.
S. Take a table spoonful every hour or two, till the vomiting ceases.

August 8th. Found patient somewhat better, but not entirely easy; had taken six pills and two doses of the mixture, and had slept two or three hours. Her appearance is somewhat improved, but she still vomits occasionally, and has hiccup.

Treatment. Enemas of infus. sena and salts. Ol. ricini.

Evening. Much worse; looking very pale; eyes yellow; pain very severe; great anxiety; very restless, tossing &c.; no stool; had taken several enemas, also the oil, but threw it up.

Treatment.—Take infusion of senna, manna and salts in broken doses—strong purg. enemata.

℞. G. Camphor ʒss.
Chloroform, ℥i; M. ft. solu.
S. Take 30 drops every hour or two till the pain is relieved.

August 9th.—Found patient extremely ill—pain agonizing—no stool—nausea distressing. She had taken several doses of the chloroform and camphor, but it produced only temporary relief. Her pulse now seemed more tense. I saw that if not soon relieved, she must die.

Treatment.—Ordered blood ʒxvi. to be taken by cups over the seat of pain—afterwards to take one drop of Croton oil in mucilage every half hour till it purged—purgative enemas.

Evening.—Found patient greatly relieved. She had taken 4 drops of the croton oil, been freely purged and was now easy, but very weak; had taken some light broth and was inclined to sleep—pulse 120—skin cool and sweating freely. To take sulph. Quinin. grs. iii., sulph. morph. gr. $\frac{1}{8}$, every three hours, till she slept.

August 10th.—Found patient much better—had rested well till 4 A. M., when the bowels were moved; then took a dose of the quinine and morphia. I found her sound asleep in the morning, and examined her pulse in this state, I found it intermittent; but it became regular as soon as she awoke. She said she felt much better; had a little pain in the back; skin cool and moist; tongue moist and sore; she is ptyalised; takes food. Continue the quinine and morphia.

Evening.—Backache continues; otherwise better; skin cool and moist; no stool; pulse upwards of 100.

Treat.—Purg. enema; continue the quinine and morphia

August 11th.—Rested badly; suffers greatly with her back;

no stool. Ordered a tea-spoon full of ol. ricini every hour till it operates; to be assisted by enemas.

Evening.—Suffering greatly with her back; there seems to have been a metastasis from the bowels to this point. She is very despondent, weeps and refuses everything, especially a blister which I advised; her bowels have been freely purged.

Treatment.—Apply a sinapism to the seat of pain; a table-spoonful of the mixture of bicarb. sod. and morphia every hour, till she sleeps.

August 12*th.*—Found patient much better; had taken three doses of the soda and morphia, and rested well. Seems now fairly convalescent; skin and eyes quite yellow; mouth better; some appetite. Continues the mixture, *pro re nata.*

August 13*th.*—Found patient sitting up and eating a beef-steak; easy and hungry.

August 16*th.*—Has continued to improve, but has had to take one or two doses of the soda and morphia mixture every day to relieve uneasiness in the bowels; her bowels are open and she has a good appetite. *Discharged.*

Remarks.—This was certainly the worst case of colic I had ever seen. Although I was told that her previous physician had called the disease "*inflammation of the bowels,*" I soon became satisfied that it was colic; and I have acknowledged my indebtness to the communication of Drs. Ashbel Smith, and Bowers in the May No. of the New Orleans Medical and Surgical Journal, for a valuable suggestion in its treatment. I alude to the abstraction of blood. I still think this case would have been lost, but for the loss of sixteen ounces of blood under circumstances and appearances which certainly nothing but *experience* would have justified. It was at this stage of the case that I referred to the paper mentioned, which caused me to order the cups.* The next case of colic I saw was a servant of this woman, and lived at the same place.

Case 2.—A mulatto girl, aged about 20. She was sick at the same time with her mistress, and had been attacked in a similar manner with severe griping, costiveness and vomiting. She had been suffering in this way four or five days, but had been freely purged and was considerably relieved when I first

saw her on the 8th of August. She had taken a dose of purgative pills in the morning; so I gave her nothing.

Evening.—I found her still suffering with pain and nausea; no fever; no stool. Ordered the infus. senna, manna and salts in broken doses; enemas of the same. After the bowels are moved, to take the chloroform and camphor like her mistress; it was the same evening.

August 9th.—Much better; freely purged; rested pretty well after taking two doses of the chloroform and camphor; now has but little pain and wants to eat. Ordered to take the quinine and morphia like her mistress; light food.

August 10th.—Rested well and is hungry. Continue medicine and diet.

August 11th.—Entirely well. Discharged.

Case 3. Mr. J., aged about 45, has resided in the city seven or eight years and had yellow fever. Mr. J. says he had been drinking intemperately during the winter and spring, but stopped suddenly and took the Temperance pledge about a month before this attack. During this time says he drank freely of soda water, but felt no inconvenience from it. He had not been exposed in any other way to the poison of lead. On Sunday morning, August 5th, he was seized with pain in the abdomen, which he could not trace to any recent imprudence. Of his own accord, he took a dose of castor oil, which operated freely, but without affording much relief. The griping continued throughout the following day and night. On the 7th he went to see his physician, who was sick. He was advised to be cupped and take some purgative pills.

August 8th.—Early in the morning I was called to see him and found him in much the same condition as case no. 1; severe griping pain; vomiting bile; bowels costive; skin rather cool; pulse frequent and small; tongue slightly furred; but little thirst; dejected and restless.

Treatment.—℞ Calomel, sulph. quinine, ā ā ℈i. sulph. morphia gr. i. M. Make into 8 pills. Take 2 pills every 2 hours. Sinapised poultice to abdomen; hot mustard pediluvium.

Evening.—Found him somewhat better, but very anxious and not free from pain; no stool.

Treat.—Ordered a strong purg. enema; afterwards, the chloroform and camphor, *pro re nata.*

August 9th.—Found Mr. J. extremely ill; had spent a wretched night; pale, weak, vomiting and in pain; pulse 130; no stool.

Treat.—Infus. senna, manna and salts, in broken doses; enemas of same. If these should not produce the desired effect, to have one drop of Croton oil every half hour till it purge.

Evening.—Purged freely; pain gone; very weak; skin cool and sweating; pulse 130.

Treatment.—℞. sulph. quin. grs xv. tr. opii gtt. xxx. M. Take all at once.

Night.—Found patient very prostate; the purging continues to excess.

Treatment.—℞. tr. catechu ℥i., paregoric ℥ss. M. Give two teaspoonsfull after every two stools, till they are checked. Port wine and arrow root.

August 10th.—Found patient much better; took only two doses of the astringent, and rested well. He says he feels much better, and looks brighter in the countenance, though he is extremely weak; skin pale, cool and sweating profusely; pulse 120, small and feeble.

Treatment.—Ordered quinine grs. ii. camphor gr. ½, every two hours; dry mustard to be rubbed over the extremities. Port wine and chicken soup.

Evening.—Much better; skin warm and more dry; pulse with more volume, but still frequent; has taken three doses of the quinine and camphor. Continue the port wine and soup; no medicine.

August 11th.—Rested well and is much better; has slight uneasiness in the bowels. Ordered two more doses of the quinine and camphor.

His physician being now able to attend to business, I turned the case over to him. He continued to mend from this time, though Dr. M. told me he had to give him *Battley's Sedative* for several days to keep down the pain which constantly threatened to return.

August 19th.—I met Mr. J. in the street, and he told me he was quite well.

Case 4.—Mr. W., a young man aged 25; has lived in the city nine years, and had yellow fever. He is a patient of Dr. H., who requested me to attend to him during his short absence from the city. Mr. W. had been attacked with colic on the 8th of August, pretty much as the foregoing cases, and had taken a common salt emetic of his own accord. This did no good, and he continued to suffer till the 10th, when Dr. H. was called in. He gave him a strong dose of calomel and opium, and ordered a sinapism to be applied to the seat of pain. On the following morning Dr. H. ordered a large blister to the abdomen, and a mixture of sweet oil and spirits of turpentine, equal parts; a teaspoonful every two hours.

August 11*th*.—I saw the patient for the first time late in the evening. I found him complaining chiefly of the blister and strangury. The colic pain was better; no operation on the bowels; his skin pale and cool; pulse about 60. Dr. H. had remarked that the pulse was very slow.

Treatment.—One drop of croton oil in mucilage every hour, till it operates; cathartic enema if necessary.

August 12*th*.—Found patient sitting up, but still complaining of colic. He had taken three drops of the croton oil, and an enema, and been freely purged, which afforded considerable relief; belly soft and rather full; pain in the bladder, with frequent micturition, and the peculiar odor of turpentine in the urine; pulse 78; skin cool and moist.

Treatment.—℞. sulph. quin. ℈ i., tr. opii, gutt. xxx., aq. flor. aurant. ℥ i. M. Take the whole at once, immediately.

Evening.—Says he slept two or three hours after taking the quinine and laudanum, sweated profusely, and remained easy up to this time. Begins to feel the pain returning; has had two evacuations; skin cool and moist; pulse 70, and soft; tongue furred and moist, but little thirst. Ordered to repeat the dose of quinine and laudanum.

August 13*th*.—Found patient perfectly free from colic; has slight uneasiness in the bladder; urine free; says he rested well after taking the quinine and laudanum; neither dose affected his head in the least. Ordered a purgative enema. Dr. H. having returned to the city, I handed the patient over to him.

August 15th.—Dr. H. informs me the patient is well. He was not salivated. On the 20th, the patient called on me and said he was completely relieved of the colic. He said he had a similar attack of colic last winter, whilst engaged at work in a printing office.

I met with the following cases at the Charity Hospital, and took the notes at the bedside. They were all treated by the house-surgeon, Dr. Wederstrandt.

Case 5. I. B. G., a German, aged 25, has lived in the city one year; a carpenter, but has kept a bar for the last two months. Says he is very temperate and appears so, but occasionally drank a little gin or madeira wine. There was a soda fount in the room, but he thinks he has not drunk more than one glass in the last three weeks. Does not like it. Says he was in the habit of handling ice a great deal, and thinks his sickness may be attributed to this, having been quite indisposed for a week or two. He was attacked with chill and fever on Monday, the 6th of August. He was quite unwell the rest of the week, sometimes discharging blood from his bladder. He applied to a physician, who gave him a dose of castor oil and some quinine, which stopped the chills. He began to have colic on Friday the 10th, and the pain increased from day to day till Tuesday the 13th, when he entered the Charity Hospital. Happening to visit the hospital that morning, we came across this case, and the house-student about to make the first prescription for him, in the absence of the house-surgeon. The patient had severe griping pain in the bowels, attended with vomiting and costiveness. His skin was rather cool and pale; pulse but little disturbed; tongue furred; but little thirst.

Treatment.—I suggested to the student the following prescriptions, which were executed immediately, viz: V. S ad deliq. animi. ℞ Calomel grs. x. pulv. opii iii. grs. M. Take at once. Sinapised poultice to abdomen and hot mustard foot-bath.

August 14th.—Patient says he was greatly relieved by the bleeding and medicines, and rested pretty well; but still has pain this morning.

Treatment.—By the house Surgeon. ℞ Calomel grs. xviii.

pulv. opii grs. iii, M. ft. pil. No. 6. Take one four times a day; enema of colocynth; mustard poultice.

Noon.—He was ordered Tinct. opii Acetat. ʒi., Aq. minth. ℥i. M Take half of it immediately and the remainder in an hour if not easy. Ol. ricini

August 15th.—Much better; he had been freely purged, and rested pretty well. No medicine.

August 16th.—Quite easy. No medicine.

August 17th.—Bowels too loose; all pain gone. Ordered black drop ʒss. night and morning.

August 18th.—Rested pretty well; pain all gone; mouth sore; convalescent. He was discharged a day or two afterwards.

Case. 6. J. Mc. C., a gardiner, aged 34, has lived in the city 10 years and had yellow fever; says he was taken with pain in his bowels after going to bed and asleep on Sunday night, August the 12th. He took a dose of castor oil which opened his bowels and relieved him considerably. On Monday he overheated himself running to a fire, and in the evening was quite unwell. On Tuesday morning he had some pain in the back, and at night the colic commenced in earnest; the pain was violent; he vomited bile freely, and was costive.

August 15th.—Entered the Charity Hospital, in great pain. We take the following prescriptions from the book of the ward.

1℔ Ol. ricini ℥ii, (this was rejected.)

2. ℞ Calomel, grs. xii, pulv. opii grs. ii, M. Take at once.

3. ℞ Calomel, grs. xii, morph. sulph. grs. i, M. in six pills. Take one every three hours.

Noon.—Pain and vomiting still continue; no stool.

Pres. 1. Tr. opii Acetat. ʒi. Take at one dose.

Enema Colocynth. The suffering still continuing very great, he was ordered the following: V. S. *ad nauseam*; afterwards—℞ Sulph. quinine ϑi, Tr. opii ʒss. M. Take at one dose.

7 *o'clock*, P. M. Still suffering greatly, he was ordered the following: ℞ magnes. calc. ϑi, liquor morph. sulph. ʒii., aquæ minth. pip. ℥ii. M. A tea spoonful every time he vomits. To be cupped freely over the abdomen afterwards; a blister 6 x 8 to abdomen.

August 16*th*. Says he had pain all night; but one stool. Early this morning he had a full warm bath, and enema of colocynth. He had two free stools which produced immediate relief, and he slept about an hour. At 10 o'clock, A. M., we found him comparatively easy, though he still had some pain in the back and slight nausea. Seems drowsy.

August 17*th*. Rested badly, but is easier this morning. Mouth getting quite sore.

Presription. Enema colocynth. At night he was ordered syrup morphiæ ℥vi. ol. minth. gutt. ii. M. at one dose.

August 18*th*. Rested well after taking the anodyne last night; has slight pain this morning; mouth very sore; pulse 80; urine free.

Treatment. ℞ Ol. ricini, ℥ii. ol. minth gtt. ii. Enema colocynth. His bowels were freely purged, and he was relieved. On the 20th he was discharged, having no complaint but a sore mouth.

This was certainly an obstinate case, and required the most powerful remedies to relieve it. The man told me he had not been exposed to lead in any way; but that he was in the habit of drinking a glass of soda water nearly every day, and had drunk some champagne at dinner the day he was taken with the colic.

Case 7. P. M. an Irish drayman, age thirty-five, has lived in the city ten years, and had yellow fever. Says he has had slight pain in the bowels for the last two weeks, but he did not lay up. On Monday, August 13th, the pain became so severe that he stopped work, and took a dose of salts and a seidlitz powder. These opened his bowels, but did not remove the pain. Had pain all the 14th. August 15th he entered the hospital, with violent pain, vomiting, &c. *Treatment*. Warm hip-bath; mustard poultice to abdomen; syrup morphiæ ℥vii. at one dose. Colocynth enema. These remedies afforded no relief.

Noon. Calomel grs. xv., ol. ricini ℥ii. taken together. Colocynth enema; anodyne poultice. Still no relief.

Night. V. S. *ad. deliq. animi*. ℞ calomel grs. xii. sulph. morph. gr. i. M. in six pills; take one every three hours. Syrup morph. ℥vi. at one dose.

August 16*th.* Had pain all night. Early this morning he was ordered a full warm bath, which afforded great relief; his bowels were opened, and he went to sleep. ℞ calomel ℈i. in six pills. Take one every three hours.

10 *o'clock*, A. M. we saw him. He was considerably relieved, but had some pain in the back and bowels; urine scant and painful in discharge. Warm bath to be repeated.

August 17*th.* Rested pretty well, and feels much relieved; mouth quite sore; is weak, but free from pain. He asked for his discharge and was permitted to go.

We are indebted to our friend, Dr. J. T. Lowe, for the following interesting case.

August 13*th*, 9, A. M. Louis Banks, colored man, aged forty-five. For two weeks past, has occasionally had severe pains in the abdominal region, which were at times partially relieved by purgatives. *Present condition.* Dull pains throughout the abdominal region; pressure does not increase them; soreness of muscles of extremities; tongue coated with brownish fur; eyes injected, of a yellow hue; countenance anxious; skin perspiring; slightly jaundiced; pulse about 100, very irregular; has had no evacuation since the morning of the 9th inst.; cannot sleep at night.

Ordered. Dry cups to abdomen, and the following, pills, two every two hours.

℞ Hydrarg. chlorid. mit. ℈j.
G. opii gr. iv.
Pulv. ipecac. gr. iij.

M. ft. mass. et divid. in. pil. No. viij. To be followed by a dose of castor oil.

6 *P. M.* Abdominal pain almost entirely gone; much soreness of muscles of the extremities; pulse 80, full and regular; has taken the oil; has vomited once or twice; no operation. Ordered the following injection.

℞ Infus. fol. sennæ Oiss.
Magnes. sulph. ℥ij.
Ol. terebinth. ℥ss. M. ft. inject.

S. One-half to be administered now; the other in half an hour if it does not operate. Dover's powder at bed time.

August 14*th.* A. M. The injection had operated finely, bringing away several dark, very offensive stools; feels greatly

relieved ; pulse good ; skin cool and perspiring ; eyes of a deeper yellow ; no pain in abdomen, but still soreness in the extremities ; complains of nausea. Ordered—effervescing draught, and one of the following pills thrice a day.

℞ Quiniæ ferrocy grs. xxiv.
Pil. hydrarg grs. vj.
Morphia grs. iss.
M. ft. mass. et divid. in pil. No. vj.

6½ *P. M.* Has slept a good deal during the day ; pulse good ; saliva tinged yellow, though he is but slightly jaundiced ; still complains of slight soreness of muscles. Ordered—cataplasm of flax-seed meal and mustard to abdomen. Dover's powder at bed time.

15*th*, 10 *A. M.* Slightly salivated ; soreness of muscles gone ; pressure produces a little pain upon the abdomen ; urine scanty and high colored ; eyes not so yellow ; pulse about 85 ; says he feels much better ; has had no operation since early yesterday morning. Ordered—dose of sulph. magnesia ; continue effervescing draught and pills.

6. *P. M.* Feels very comfortable ; had not taken the salts Ordered purgative enema.

16*th*, 10 *A. M.* Injection had no effect ; took a dose of oil, which had operated copiously ; stools dark and very offensive ; has no pain in his abdomen ; soreness of muscles gone ; skin cool and perspiring ; pulse 95, rather weak ; tongue still covered with brownish fur ; eyes still yellow ; mouth a little sore ; urine of a light color and freer. Ordered a wine glass of the following mixture thrice a day :

℞ Infus. Cinch. comp. ℥iv.
Infus. serpent.. ℥iij.
Soda et potass. tartr. ℥jss.
M. ft. mist.

Chicken broth. Mouth wash of borax, &c.

6. *P. M.* Through the inadvertency of the nurse he had not taken the mixture ; complains of pain in the abdomen and spleen ; had two operations during the day. Ordered —a blister to abdomen, to be dressed with cerate of morphia.

17*th*, 10½ *A. M.* Blister had drawn well ; pained him a good deal during the night ; skin cool and perspiring ; pulse

about 90, weak. Ordered—mixture as yesterday, every two hours; blister to be dressed with morphia cerate.

18*th*, 10 *A. M.* Free from all pain; slept soundly last night; pulse 85, rather weak; eyes still yellow; tongue is cleaning off; had two operations yesterday Continue the mixture, and a more generous diet.

19*th*, 10 *A. M.* Found him down stairs this morning, sitting up; says he feels well, only quite weak; bowels not opened yesterday; eyes much clearer; mouth not so sore; evidently improving; has had no pain since the blister was applied. Ordered—cremor tartar drink; injection this evening, if he has no operation.

20*th*, 10 *A. M.* Found him walking about; wants to go out; had a good operation yesterday; mouth nearly well; says he feels stronger, but is still weak. Ordered—as a tonic, quinine two grains thrice a day. As the pain was apt to recur in the evening; this suggests another indication for the quinine.

21*st*. Discharged.

About the 1st of September, we had three severe cases of colic under treatment at the same time—one of them undoubtedly from *lead*, for he was *a painter* and had suffered in the same way before; the other two were laboring under relapses from recent attacks of the prevailing disease. One of these last had been attended by another physician, in the first attack; and he was still laboring under salivation—we had attended the other, and his mouth was barely well. An admirable opportunity was here presented to compare the two complaints, if they really be distinct in their origin. The similarity of symptoms in all was most striking. They all presented *severe abdominal pain, constant vomiting, obstinate costiveness, and no fever.* But there was one well marked difference between them —the painter presented plainly the *bluish tinge of the gums* recently pointed out as pathognomonic of lead-colic; whereas, the others did not. We treated all three cases by means of free depletion, decisive anodynes, the warm bath, cathartics and purgative enemas. To the painter we gave calomel and opium, unto salivation; but to the others we gave no mercury. They all did well. With the view to confirm the convalescence and prevent relapse, we gave the two last the iodide of

potass and colchicum, with good effect. They had no subsequent attack.

We had another opportunity of observing three cases at the same time, in the wards of Dr. Brickell, at the Charity Hospital. One of these men said he had suffered an attack of *lead-colic* some six months previous, after being exposed to fresh paint. Since that time he did not know that he had been exposed to lead in any way. Dr. B. thought the bluish tinge of the gum was more plainly marked in this case than the others; but we confess we could hardly distinguish the difference.

The last case we treated in private practice was one of the stewards of the St. Charles Hotel, whose business it was to attend to the wine cellar. This was a very temperate and genteel young man, who said he seldom drank any thing—took a glass of champaign at dinner, but very seldom drank soda. The interior of the hotel had been recently painted, but he had not slept in any freshly painted room. He said he had a similar attack of colic, whilst coming down the river on a steamboat last winter, without being able to ascribe it to any special cause. He was attacked on the evening of the 18th September; and we were called to see him just before day, on the morning of the 19th. We found him in a perfect agony, writhing with pain in the abdomen, vomiting bile constantly, and costive. The abdomen was soft, somewhat depressed and but slightly tender.

We ordered him to be cupped over the abdomen to relief of pain—an emollient poultice afterwards, and then the following mixture:

℞. Liquor. Anodyn. Hoffman. ʒj
Sulph. morphiæ grs. ii. M.

Take two teaspoonsful at once, and then one every half hour till he sleeps. With the loss of 20 ounces of blood and taking three doses of the mixture, he got easy and went to sleep. Six hours afterwards, we ordered one drop of croton oil every half hour, to be aided by purgative enemata, till the bowels should be freely moved. These remedies purged him well, but the pain still lingered, and he vomited occasionally. These were relieved by the warm bath and some more doses of the anodyne, and by the following morning he was convalescent.

This colic was met with in the practice of a number of physicians. On the 1st of October Dr. Davizac told us he had seen several cases the week previous. On the 4th and 5th October we had three cases at the Charity Hospital, which were relieved by anodyne and purgatives, without bloodletting.

Mortality.—We saw but one case that terminated fatally, and this occurred at the Charity Hospital. We were told of three others in private practice. In the list of deaths for the month of August, published by the Board of Health, we find none from *colic*, but 9 from *enteritis*, besides those qualified as chronic. In the report for September, we likewise find none from colic, but 17 from enteritis, without qualification. We have no doubt that many of these cases died of the prevailing colic The following is our note of the fatal case mentioned above.

Fatal Case at the Charity Hospital.—M. P., a delicate female, aged 21, had resided in the city two years. Entered the hospital on the 20th of August, then sick three days, with abdominal pain, costiveness and bilious vomiting. Died on the 27th August. We saw this woman frequently during her illness. She was pale and feeble. She was treated with calomel to salivation, anodynes, warm bath, poultices, blisters, &c., and appeared finally to die of *enteritis;* but, unfortunately, no *autopsy* was permitted; for, a day or two before death, her symptoms were abdominal tenderness and tympanitis, looseness of the bowels, small and very frequent pulse, great anxiety, &c.

The pathology of colic has been carefully investigated, but not with such satisfactory results as to do away with all difficulty, or difference of opinion. Andral classes lead-colic among the "non-inflammatory affections of the digestive tube:" he seems to look upon it as a neuralgic affection, seldom terminating fatally, and when it does, showing but little or no appreciable lesion in the intestinal canal. He recommends the course of treatment pursued at *la Charité*, in Paris, which consists in a succession of drastic catharties. He says that, "out of more than five hundred cases affected with lead-colic, who, during the space of eight years, were treated at the Charité, in the words of M. Lerminier, only five died whilst they were placed under the ordinary treatment of colic; and again, of these five indivi-

duals there were two, at least, who died with symptoms totally unconnected with lead-colic." * He thinks that the favorable results of this rough treatment affords strong evidence of the non-inflammatory nature of the affection.

On the other hand, Dr. John Abercrombie, in his admirable work on the stomach, intestinal canal, liver, &c.,† points out the strong tendency which ileus (or colic) has to terminate by inflammation; and adduces, in support of this view, the immense practical value of *bloodletting*, in its treatment. To the support of this view, Dr. A. can bring a strong array of the best English authors. But, as the design of this report is not so much to furnish a complete treatise on colic, as to give an account of a particular epidemic, we will return to our subject.

Having dwelt at some length upon the history of epidemic colic in former times and other places, and given an imperfect description of the disease as it appeared during the present year, let us now review the attendant circumstances, and see whether we can throw any light upon the origin or cause of the complaint.

It has been well established and long known, that lead is poisonous to the human system, and its effects are well understood. At the same time, it is well known that the acetate of lead is a valuable medicine, and has often been given in large quantities without producing injurious effects.

For a long time lead has been extensively used in the preparation of wines, cider and other liquors, for the purpose of preventing fermentation.

The places most subject to epidemic colic, as Madrid, Poitou, Devonshire and the West Indies, are those in which a great deal of wine, cider and rum are prepared and used. Nearly a hundred years ago, Sir George Baker proved that lead abounded in the cider of Devonshire, and John Hunter proved that it abounded in the new rum distilled in the West Indies.

A disease called *bilious colic* and *dry bellyache*, in its earliest stages precisely resembling *lead-colic*, has been known to prevail at various places during the summer and autumn, and under circumstances giving so little ground to suspect the presence of

* *Medical Clinic on the Abdomen*, p. 288.

† *Pathological and Practical Researches on Diseases of the Stomach, the Intestinal Canal, the Liver, &c. By John Abercrombie, M. D. &c.* 1830.

lead, as to induce many sagacious physicians to attribute it to other causes, such as atmospheric vicissitudes, malaria and the like. It prevails chiefly at the season when malarial fevers are most common, and has been known to precede and follow epidemics of bilious and yellow fever.

The colic of this year, in New Orleans, has prevailed during a very warm and wet season—soon after the disappearance of Asiatic cholera—at a time when there was much less general sickness than customary, and without immediately preceding any other epidemic, unless the moderate amount of mild yellow fever we have had can be thus styled.

In endeavoring to search out the origin of this colic, it was but natural for us to direct our attention first to a cause which we know will produce the complaint whenever it is introduced into the systems of most people to any great extent; we allude to *lead*. Let us, therefore, inquire, 1st, what are the most common sources from which lead is introduced into the system? and 2ndly, have the citizens of New Orleans been more exposed to these sources this year than customary?

The most common sources from which lead is introduced into the system are, the effluvia from fresh paints, inhaled into the lungs, and various fluids holding it in suspension and drunk into the stomach, such as spirituous liquors, wines, ale, soda-water and common water. Now we are sure that we have not been more exposed to fresh paint this year than usual. The citizens of New Orleans drink all sorts of liquors, good, bad, and indifferent; from the most costly wines and spirits, down to the cheapest claret, ale and soda-water. It would be impossible to say whether all these various fluids have contained more lead than usual this year; but a slight examination has enabled us to detect a considerable amount of this poison in the soda-water, cheap claret and draught ale. Claret is always drunk from bottles, and the lead discovered in it must have been put in to prevent the acetous fermentation. Soda-water and draught ale are drawn through leaden tubes varying from 15 to 60 feet in length. On inquiry, we ascertained that the quantity of soda-water consumed this year was vastly less than customary. Consequently, assuming the usual number of fountains to have been in operation, (which is probably true,) the fluid must have been allowed to remain an unusual

length of time in the leaden tubes. The most frequented establishments seldom used less than from one to three founts a day; and of course the exposure to lead was very slight. Moreover, at several of these, the water is passed through the phosphate of soda, as a corrective. But the smaller and less frequented establishments, in retired parts of the city, have found such a limited demand for the water, this year, that one fount would sometimes last as long as two weeks. In such cases, the exposure to lead was very great. At the conclusion of this report, we shall give the results of our examination of soda-water and other fluids, with the view to ascertain whether they contained lead. On inquiry at several factories, we could not discover that any lead was used in the preparation of soda water.

We called at the office of the Water Works Co. to ascertain to what extent the water in common use was exposed to lead. We are informed that the water is conducted through large iron pipes, placed under ground in the middle of the streets, to the extent now of about 37 miles; but that all the branches for private purposes are made of lead. These leaden branches have been greatly increased within the last two years, and now reach the extent of about one million feet. The reader will form his own conclusion as to the influence of this source of lead. If, from this time forward, colic should continue to prevail here to any great extent, we may be induced to attach some importance to it.

It is known that *printers* are very subject to colic; and it has been thought to proceed from handling type and holding it in their mouths, which is quite customary with them.

From the foregoing considerations we are led to the conclusion, that the only source of lead to which the citizens of New Orleans have been exposed in a greater degree than usual, this year, has been *soda-water;* this fluid having been drunk to a very moderate extent, and consequently longer held in leaden pipes. If this source really exerted much influence in the production of the late epidemic, we may find some reason for the fact of the lower classes suffering most, in their drinking chiefly at retired fountains, where the water is kept longest on hand.

So much for *lead*, as a cause of the late epidemic colic.

Doubtless many will think that if it had any agency in the matter, it was owing to a predisposition caused by a peculiar constitution of the atmosphere. And there might be something in this. It is well known that persons who have much to do with lead, are not equally liable to its poisonous impression at all times. They often resist it for months and years; and then unexpectedly have colic. This naturally brings us to a consideration of *endemic causes*; and here we become involved in all the difficulties which have attended our investigation of the remote causes of Zymotic diseases. We have seen that Dr. Chapman and others have attributed bilious colic to the causes which produce fevers; and the cotemporaneous prevalence of the affections certainly affords some ground for the presumption; but the connection cannot as yet, be satisfactorily demonstrated. All we can do at present is, to lay before the reader all the facts we have been able to obtain relative to the subject; from these he may form his own conclusions. Neither Dr. Smith nor Dr. Bowers make any allusion to the poision of lead, in their paper before quoted. Dr. B. saw the disease in an isolated place; where we can hardly suppose there was any great exposure to lead. He says also he heard of cases upon the Rio Grande. We have written to him on the subject and made special inquiry about lead. If we are so fortunate as to get a reply, it shall be appended to this Report.* We also addressed Dr. McPheeters, of St. Louis, and Dr. Drake, of Cincinnatti, to know whether those cities suffered from any such complaint after the cessation of epidemic cholera. Dr. McP. re-

* MEMORANDUM FROM DR. ASHBEL SMITH, November 19th, 1849.—We have just had the pleasure of meeting with Dr. Ashbel Smith in this city, and had a conversation with him on the subject of this colic at the Brasos, and at Galveston. He is inclined to attach some importance to the suspicion of *lead as its cause*. He says that all the water used at Galveston is caught from the roofs of the houses, conducted chiefly through tin gutters into cisterns; being there exposed, to some extent, to the lead and pewter used in soldering. Moreover, that a considerable amount of soda water from fountains, and mineral water in bottles is used during the warm season; and that he had heard several persons who were subject to colic, attribute it to this source.

He says that Brasos Island is nothing but *a low, sterile sand bank*, which is completely inundated by the sea about once in every three years. There being but few houses there from which to catch water, the most that is used is brought in vessels. The people are in the habit of drinking all sorts of cheap and vile liquors, some of which may very probably be impregnated with lead.

plies (Sept. 21st,) that St. Louis had been remarkably exempt from all diseases since the disappearance of cholera; "that he had not met with or heard of a single case of bilious colic."

The following experiments were made in a hurried manner during the summer, and while under a press of engagements. We do not, therefore, claim for them anything like chemical precision and exactness. We are aware that the tests for lead also act upon various other metals, but as lead and copper are the only metals to be suspected in soda water, we directed our attention exclusively to them We had intended to examine a variety of wines and malt liquors commonly drunk in this city, but had not time to attend to it. Since discovering the great extent of leaden pipe used in our water works, we shall certainly have the water carefully examined, if colic should continue to prevail here to a great extent. The observations which follow may be taken for what they are worth.

Tests for Lead and Copper in Soda Water.

On the 12th of September 1849, at the Drug Store of Gottschalk & Co., different specimens of soda water were tested in the presence of Prof. Nott and Dr. Simonds, with the view to ascertain whether *lead* or *copper* could be detected.

Specimen 1. From a fountain in Canal Street, between Franklin and Trèmé Streets; the fountain contains about 20 gallons; leaden tube between the fountain and spout about 20 feet long. They sell about two fountains a month; the one from which this specimen was taken has been in use eight or ten days. The sale of the water being slow, the liquid remains in the leaden tube a considerable time; all night generally.

Test.—On adding to this, the *sulphuretted Ammonia*, (prepared by saturating the liquor Ammoniæ with sulphuretted Hydrogen,) a very slight change of color from transparent *to brown* was produced, which showed a *trace of lead.*

To another portion, the Prussiate of Potass was added. This also darkened the color a little; showing a trace of copper.

Specimen 2. From a fountain on Circus Street, between Julia and Girod Steets. The fountain will hold 18 gallons; they sell

about one a month. This one has been in use about two weeks; leaden tube 30 feet.

Test.—On applying the above tests, a *bare trace of lead was detected*, and *no copper.*

Specimen 3. From a fountain on Nayades Street, above Melpomene Canal. The fountain will hold 14 gallons; leaden tube about 20 feet; sell about one fount a week. The one from which this specimen was taken has been in use five days.

Test.—On applying the above tests, the water was turned very dark brown by both, showing a strong impregnation both of lead and copper.

Specimen 4. This was from Mr. Gottschalk's fountain, corner of Royal and Customhouse streets. This is one of the most fashionable resorts in the city and the quantity of soda water used is very great. Mr. G. is an excellent Chemist and Apothecary, and prepares the water himself. His founts are large and the leaden tubes about 60 feet. Says he has sold much less than usual this summer, but even now sells 18 or 20 gallons a day. Mr. G. himself kindly performed these experiments for us. He says he has long been aware that soda water is liable to become impregnated with lead, and therefore generally has it passed through the Posphate of soda, for the purpose of correcting it. He tested for us a specimen from a fount in which this precaution had not been taken this morning; the presence of lead was evident, but the test revealed no copper, Mr. G. has two fountains, and the specimen tested was from the one not used to-day.

Specimen 5. Corner St. Charles and Canal Streets; fount holds about 14 gallons; use about one fount a week; leaden tube about 12 feet.

Test.—As before. *Lead evident, but no copper.*

Specimen 6. Drug Store of M. Bertrand, corner Royal and Bienville Streets. Mr. B. prepares his soda water himself. Puts up a new fountain every day, though he does not use it all of late; fount and tube about the ordinary size. He carefully uses the Phosphate of soda to prevent the impregnation of lead, as does Mr. Gottschalk. On applying the test, I could detect *neither lead nor copper* in this water; but on adding to the mixture

a drop or two of solution of Acetat. Plumbi., the brown color was instantly produced.

Specimen 7.—Corner of Customhouse and Trêmé streets. This is the place where the two first cases of colic occurred, which I have noted. There have since occurred two other cases at this place, viz.: an old white man and a colored woman. I am assured that the old man has not drunk three glasses of the water since the fount was put up, and that the colored woman drank but very little.

Examined Sept. 13th. Water prepared by Holmes & Co. Fount holds about 14 gallons. Leaden tube about 12 feet. At first, used two founts a week; but now only one in two weeks. This fount has been in use about ten days.

Test.—On applying the sulphuretted ammonia, the water at once changed to a dark brown color, showing the presence of *lead.* On applying the prussiate of potass, no change was produced.

We tested with the iodide of potass some specimens of *draught ale*, which displayed a considerable amount of lead. This ale is conducted through *long leaden tubes* in the same manner as the soda water.

After closing this report, we had the good fortune to meet with the following interesting communication on *lead poisoning*, in the *Western Lancet for October*, 1849. We deem it of sufficient importance to be inserted in connection with this, as it has an immediate bearing on the subject of the report.

"*Remarks on Lead-Poisoning. By R. Jay Kittredge, M. D., of Cincinnati.*

"I am induced to offer the Lancet a communication on lead-poisoning, arising from the drinking of cistern water, drawn through lead pipes,

"1st.—Because it has never been a subject of any research in any part of the western country; and

"2d.—Because never having been much investigated, the medical public are too slow in recognising lead diseases.

"No physician who has thoroughly studied the subject, who has analyzed the water of many cisterns containing water brought through lead pipes, can fail to come to the conclusion,

that most waters will more or less corrode lead, and hold the salt in solution.

"Lead-poisoning exists, in every degree, from the most severe case to that which is so slight that its deleterious effects have not been experienced; yet, at the same time, there may be evident marks of the poison latent in the system, and, if the patient be watched, time will develop a disease which these marks have indicated.

"Neither has any physician long investigated this subject, but what he has seen colic, paralysis, encephalopathy, and death, result from the drinking of water drawn through lead pipes. Within a few days I received a letter from the distinguished chemist, Samuel L. Dana, of Lowell, Massachusetts; he says: 'I am now engaged in analyzing the organs of the late Dr. Pierce, of Tingsboro, who died of lead disease induced by drinking well water, drawn in lead pipe.'

"It is hard to convince people that they are being gradually poisoned, until they have felt the effects of the poison. But while we use lead as a conduit in this city, and when it requires no great chemical tact to detect quite a notable quantity of the metal dissolved in the waters of our cisterns, it would be unwise to say we are not continually using a slow poison. Many medical men tell me that they think the water here will not corrode lead, but I have found, by experiment, the water used in this city, and the water of most of the country wells, is eager to corrode this metal, and by the corrosion is formed an oxide or carbonate; then, if the lead pipe is corroded and worn out by having continually formed an oxide (PbO) or a carbonate ($PbO.\ C\ O_2$), what becomes of these salts of metal unless they are the whole time being washed into the cisterns; and it is by long continued and small doses that the system is sure to become poisoned.

"Having investigated this subject for three years, and having seen the most frightful effects of 'lead pipe water' upon the system, I feared in this city to use our own, until the lead pipe, connected with the pump, was removed from the cistern and iron substituted, still leaving lead pipe conducting the water from the street to the *top* of the cistern. The cistern being empty, I commenced filling it, and, of course, threw away the first few pailsful that had been standing in and run through the pipe. At the same time, I tested the first three pailsful for lead; the quantity thrown down was enormous, certainly sufficient to taint the water of the cistern. Since that time, I have analyzed the water of some twenty cisterns; in four I have found very alarming quantities, and from two precipitates I have obtained metalic lead.

If physicians in this city do not see many cases of lead poisoning, it is because, not suspecting lead, they too often confound the effect of this poison with other diseases. If lead colic exist, and we cannot trace immediate contact with some salt of lead, we suppose it to arise from some other source. If a pain in the

limbs, a weariness or weakness constituting lead arthralgy is experienced, it is called rheumatism. And if we find a weakness of the fingers and hand, a gloominess in mind, &c., unless there is decided colic or paralysis, we are too apt to think that it is only a debilitated condition which the system happens, from some slight cause, to be laboring under.

"The constitutional effects of lead are indicated by a purple or dark-red, perhaps a bluish line, from the twelfth to the twentieth part of an inch in width, on the edge of the gums. It is almost an infallible sign that lead exists in the system, and yet too few medical men look carefully for this mark.

"Being aware that 'lead pipe water' endangers the system, are we in this city, and in other cities of the west, always to use a slow poison in our our houses, or will the medical faculty be induced to fully investigate the subject, and take measures to remedy the evil? Many, convinced of their danger, have already commenced taking the lead pipe from their cisterns, connected with the pump, and are putting in its place common two inch gas pipe (iron.) By so doing, and by catching and throwing away the first few pailsful that run through and have been standing in the lead pipe, bringing the water to the cistern, there is little danger that the whole water will become tainted. The cisterns of this city which have lead pipe connected with the pump are trebly liable to have their waters impregnated; because, besides letting the water stand in the pipe coming from the street, and pouring it every five or six weeks, already impure, into the cistern, there is the pipe connected with the pump, reaching to the bottom of the cistern, and presenting two surfaces to the continual action of air and water."

Since reading this article and reflecting more seriously on the great extent of leaden pipe used in the Waterworks of New Orleans, being *one million feet*, or more than 189 *miles*. We applied to our able Professor of Chemistry, Dr. Riddell, for his own opinion, as to the action of Mississippi river water on lead, and were obligingly furnished the following vote:

"*University of Louisiana, Medical Department,*
NEW ORLEANS, MARCH 15, 1850.

"DR. FENNER:

"DEAR SIR,—You desire my opinion as to the liability of Mississippi water to become contaminated with lead, by passing through leaden pipes. I have at present no time to investigate the subject, although it richly merits inquiry. My present opinion, which may be of little value, is this:—

"The whole amount of saline matter in Mississippi water is near $\frac{1}{10,000}$ part. Chlorides and sulphates are present, but the quan-

tity must, I think, be too minute to confer upon the water immunity against lead combination. It is, I believe, generally conceded that $\frac{1}{2000}$ of soluble chlorides or $\frac{1}{4000}$ of soluble sulphates, will ordinarily prevent the action of water upon lead.

"Yours, truly,

"J. L. RIDDELL."

REPORTS FROM LOUISIANA.

ARTICLE IX.—REPORT ON THE TOPOGRAPHY, CLIMATE AND DISEASES OF THE PARISH OF ST. MARY, LA. BY JAMES B. DUNCAN, M. D.

"JEANRETT'S, PARISH OF ST. MARY, DEC. 25th, 1849.

"DR. FENNER:

"DEAR SIR,—In compliance with your request, I proceed to give you some account of this section of country and the state of public health during the past year.

"The locality from which I write is situated on the Bayou Téche, about ten miles below New Iberia, and by the bayou, about thirty miles from the village of Franklin. The Téche, like all the streams of the alluvial lands of Lower Louisiana, runs upon a *ridge;* the lands being higher upon its banks than at a distance, and the waters of the contiguous lands, instead of running into it, drain back on the west to the sea-marsh, and on the east to Grand Lake. Formerly, the banks of the bayou, for an acre or more, were covered with timber, principally live oak, magnolia and sweet gum; but this skirting of timber has been mostly destroyed by the progress of cultivation, and a single row of live oak, with now and then a few acres of woodland, is all that is left of this once beautiful and magnificent grove. On either side of this strip of woodland is prairie, extending on the west, to the timbered swamps on the borders of the sea-marsh at a distance of five or six miles from the bayou. On the east, the strip of woodland is deaper; sometimes two or three acres; then fifteen or twenty acres to timbered lands again. The prairie lands are flat, with frequent marshes. An extensive marsh reaches from the upper line of the parish down a distance of ten

or twelve miles, at an averge of half a mile in width and at a distance of half a mile from the bayou. This marsh is generally covered with water to the depth of one and a half to two feet; but, in a long drought becomes perfectly dry. Habitations are scattered through the prairies, and generally located near small ponds of water, with which the prairies abound. The inhabitants are mostly of the lower class of French Creoles, who, constantly exposed to the malarious atmosphere, and ignorant of the laws of health and the means of preserving it, and suffering at the same time all the ills of poverty, are much afflicted with intermittents and their sequelæ, during the summer season.

The months of January and February of this year were mild and pleasant until the 22d of February, when weather unusually cold for this climate occurred, which lasted for several days. On the 27th of this month, at nine o'clock p. m., a splendid meteor was visible, which illuminated the whole atmosphere for miles and exploded with a low report, resembling that of a large cannon at a distance, and shaking houses in the vicinity. The month of March was rainy but mild. About the 1st of April a drought commenced, which lasted until June. June, July and August were excessively rainy. Occasional rains fell in September. October and November were dry and remarkably pleasant months. December has been mild and unusually warm for the season; occasional rains have occurred this month and a frost with some ice on the night of the 8th. The grinding season has been remarkably fine, no frost of sufficient severity occurring to injure the cane, an event of rare occurrence in this latitude.

With the exception of cholera in the spring, the year has been a remarkably healthy one. Cases of cholera occurred on the lower part of the Téche in January. Early in February, one or two cases occurred on a plantation on the Bayou, a few miles above New Iberia. The overseer on this place through fear of contracting the disease, left and returned to his family residing on Lake Simonet, a small body of fresh water, about ten miles west of New Iberia, where he soon sickened and died of this disease. Nine other cases, members of his family, died of the same disease in the space of five or six days. The physician attending these cases, Doctor Weld, also died of cholera, twenty-four hours ofter returning to his residence at New Iberia. The first

case of cholera that came under my notice, occurred on the 22d February, although premonitory symptoms had been general in the neighborhood for a month previously; diarrheas being prevalent and almost every one complaining of more or less uneasiness in the bowels. The cases in my neighborhood occurred mostly among the slaves. I saw but two genuine cases of cholera in whites, both of which died. Here, as elsewhere, the cholera pursued its usual erratic and eccentric course; one plantation would be suffering severely from the disease, perhaps loosing ten or twelve slaves, whilst the adjoining one would be perfectly healthy, and not a death nor a case of cholera occurring during the prevalence of the epidemic.

All the cases were confined to the Bayou; not a case did I see or hear of in the prairies or at a distance of half a mile from the Bayou, with the exception of the cases at Lake Simonet, and there I am told local causes existed, which readily accounted for its spreading and malignity.

Not a case occurred among the free mulatoes, a large number of whom reside in my vicinity, both on the Bayou and in the Prairie.

And here I will remark (as this subject is at the present time, exciting much attention, that this class of people, including Terceroons, Quarteroons, Quinteroons &c., in this vicinity, are as healthy, as robust, and as prolific as any portion of the community. Many of the men are fine specimens of manhood, have large families of children, and among them are now existing (both male and female) several remarkable instances of longevity. These remarks I presume may be confirmed by the testimony of other physicians practising among them.

With the exception of cholera cases, the Spring months were healthy. I saw no cases of pleurisy or pneumonia, so common at that season of the year. All other diseases seemed to be merged into Cholera, and it "reigned supreme."

As to the treatment, as much diversity of opinion and practice prevailed here as elsewhere—most physicians, however, depended upon calomel, opium and camphor, variously modified, with moderate stimulation and counter-irritation. In the few cases which recovered in my hands, I attributed much benefit to the early application of blisters to the epigastrium and the extremi-

ties. In the less rapid cases, where time was allowed for the production of strangury, convalescence was sure to follow.*

Doctor Pigné, a French physician at that time residing in my neighborhood, depended upon astringents solely for arresting the discharge. His remedy was, a decoction of oak bark and persimmon bark, (erroneously printed Peruvian bark) in the New Orleans Medical and Surgical Journal, in an article furnished by him for publication) to be administered by the mouth and *per anum.* This prescription is no doubt a good remedy in the early stages. That it succeeded promptly in arresting the diarrhea I am fully satisfied; but in the stage of collapse, I have no confidence in it. It was extensively used on some of the large Creole plantations, and from the fact of its being a simple remedy and always at hand, I have no doubt that it *prevented* many cases of cholera.

In the article alluded to, Dr. P. seemed to doubt whether this epi a ic was *genuine cholera*, from the fact that he found urine in the bladders of several cases after death. This fact does not prove that there was a constant secretion of urine until the moment of death, as urine may have been retained in the bladder many hours after all secretion had ceased. In all the *genuine* cases of cholera that I saw, I am certain there was no discharge of urine; and from external examination, I am of the opinion that no urine was secreted. I made no examinations after death.

Since the cholera subsided, the country, compared with other years, has been remarkably healthy. During the summer very little sickness occurred, and that easily cured. During the autumnal months, intermittents prevailed; but not extensively nor grave in character. I have met with no cases of congestive fever in adults and but two cases in children, one of which succumbed from copious serous evacuations from the bowels, and the other from convulsions.

On the 24th of July I was called to a case of *purpura hemorrhagica* in a negro girl aged about twenty. I found her with some febrile heat of skin, frequent, soft, compressible pulse, with copious hermorrhages from the gums, nose, anus and bladder.

* May not this be a hint worthy of serious consideration? Who knows but that the tincture of cantharides, given freely enough to cause strangury, may prove an invaluable remedy in cholera? Amongst the multiplicity of remedies which have been recommended for this disease, we do not recollect having seen the tincture of cantharides. We deem it worthy of a trial.—*Ed.*

A large black spot (darker than the general hue of the skin) was visible on the face which had existed for some weeks, and was gradually extending. Previous to my visit, she had been bled to the amount of twelve or fifteen ounces, and a dose of calomel, followed by castor oil, had been exhibited. Under the use of astringent washes to the mouth, drinks of decoction of oak bark, and water accidulated with elix. vitriol, with solution of sulph. quinine and tannin, the hemorrhages were all promptly arrested. At my next visit, on the 26th, I found her in a hopeless state of collapse, in which she died. I could make no *autopsy*. I mention this case because such cases are rare in the country, and this is the first one that has came under my notice.

A very common disease among negroes on plantations in this part of the country is *a state of anemia*, very often attributed, and perhaps justly, to the pernicious habit of *dirt-eating*. On examining negroes on plantations, a medical man is surprised to meet with so many of these cases. Almost every large plantation has three or four, and sometimes more of them. Until the vital powers of the system are beginning to be undermined, no marked symptoms of disease being visible to the eye of the planter, they are generally suspected of laziness or malingering. After this condition has existed for some time, the skin presents a paler hue than natural; or, if the subject is a mulatto, an ashy white; the lips, tongue, lining membrane of the mouth, and palms of the hands white, lacking the reddish tinge of health; the legs œdematous, abdomen distended, pulse full, soft and frequent; action of the heart violent; if blood is drawn, it is pale and watery; respiration on the slightest exertion anxious and hurried; in fine, all the symptoms that characterise *chlorosis* in females. We find this condition of things in subjects of both sexes. Many of these cases are, doubtless, produced and aggravated by the deleterious habit of *dirt-eating*. But I never heard a negro admit that he was addicted to the habit. Some admit that formerly, years ago, they ate dirt, but do not now; and others, trusty, truth-telling negroes on other subjects, on this, will lie most pertinaciously to the last, unless detected in the act. I am inclined to think that many of these cases are unjustly attributed to dirt-eating. With many, no doubt, dirt-eating is a symptom only of a diseased condition of the digestive organs and of the system generally. With them, dirt-eating is the same propensity which white females resort to, to relieve a disordered

acid condition of the stomach, by the eating of quantities of chalk, magnesia, &c. This condition of system is often, in my opinion, produced by a deficiency of suitable nutriment. The diet of negroes on most plantations being salt pork, corn bread and molasses—rarely eating fresh meat and vegetables—a condition of the system is thus produced, closely allied to *scurvy*. In addition to the symptoms above described, I have occasionally seen a spongy state of the gums. There is generally present functional, and sometimes organic disease of the heart.

The restoration of these cases to health, whether addicted to dirt-eating or not, is troublesome and tedious. The *moral* has to be prescribed for as well as the *physical* symptoms. To restore the healthy condition of the body, nutritious food, fresh meats, vegetables and greens, porter or wine are necessary; and, as to medicinal agents, preparations of iron in any or all forms, combined with stimulating stomachics and bitter tonics, laxatives when indicated, and out-door exercise. Confinement within doors aggravates the disease. To cure the habit of dirt-eating, many resort to the cruel methods of preventing the indulgence of it by tin masks for the face, iron gags, chaining on plank floors, &c. By using these means, it is true, the habit cannot be indulged in, but *the cause* that produced the propensity still exists, and the disease cannot be cured so long as these depressing moral agents are used. Restore the healthy tone of the system, invigorate the subject, put rich blood into his veins, clothe him well, feed him well, and do not overtask him; arouse his feelings of pride, teach him to feel that he is a reasonable and rational being, and, in a majority of cases, success will attend our efforts, and we shall have the satisfaction of rescuing a valuable servant from the grave.

The following facts were furnished me by my friend, Dr. J. S. Fountaine. I am acquainted with all the parties, and I am satisfied that they are true. About two years ago, Dr. F. was called to attend Mrs. W. D., a young Creole woman, aged about 20, in her first labor. After a rather tedious labor, she was delivered of a good sized child, at full term, in which the upper part of the head, from the supra orbital ridge back, was entirely wanting. The surface of the brain was flat, and covered with its membranes; the pulsations of the brain were distinctly visible, and the child survived a few seconds only after birth.

After an interval of two years, Mrs. D. was again delivered

of another *acephalous monster*, at full period of gestation; Dr. F. being present at this labor, in August last. In this, as in the other case, the whole upper part of the head was wanting. This child survived some six hours. Dr. F. has promised me the minutiæ of the cases, but, as yet, I have not received them.

The husband and wife in this case are *first cousins*. Could this fact have had any influence in producing these cases of monstrosity?

The result of intermarriages would be an interesting subject for inquiry in this state, as intermarriages are common, especially with the lower classes of Creoles.

REPORTS FROM LOUISIANA.

ARTICLE X.—On the cholera of Lafourche Interior. By Wm. A. Booth, M. D.*

There are two forms of Asiatic cholera. One warns; the other gives no fair warning of the access of its fatal stage. One begins with a diarrhea, which lasts from twelve to twenty-four hours; *then* rice-water evacuations and collapse appear. This premonitory diarrhea is controllable, and to cure it is to cure the disease.

The other form of cholera has but *one stage*—the stage of depression. The first is an *honest* disease. It says to its victim: "I have attacked; beware lest I slay you." None except the previously diseased ought to die of it. The other, is stealthy in its approach, and its grasp is fatal. It springs upon its victim from ambush. He can not *know* that it is upon him until almost hopelessly within its power. This is the form of cholera whose march alarms the world, exhibiting the impotency and humbling the pride of man. Andral says, with but little exaggeration: "It begins where other diseases end—in death."

Both these forms of cholera have raged upon the banks of

* The following paper contains the greatest number and variety of facts relative to cholera that has ever been published in America, to our knowledge.—Ed.

Bayou Lafourche. They approach each other in grades of mildness and violence, but the line of demarcation between them is always distinct. They never prevail together. This is one peculiarity, not noticed in the books, which has characterized the cholera of Lafourche. The ætiology of almost *all* endemic and epidemic diseases is enveloped in mystery. What occasions them? We talk about *miasm;* is there any such thing? We suppose and surmise, but who can affirm or deny its existence? Some of these diseases are as sudden, as violent and as fatal as cholera. The peculiar mystery of cholera does not, therefore, consist in its origin, its suddenness, its violence, or its fatality. *The manner in which it travels is its only* ADDITIONAL OR PECULIAR *mystery.*

All other diseases are somewhat regular in their advent and duration. We cannot demonstrate what produces them, but we can form some idea, we can calculate with some degree of exactness, as to when and how they will approach, and the length of time they will afflict us. Asiatic cholera baffles all such calculations. It strikes in the winter and in the summer, in damp weather and in dry, in favorable and unfavorable circumstances. Prudence may lessen its power, but cannot keep it away, arrest, or banish it. When bad weather, bad food, and great imprudence combine to produce cholera, and it is produced, we are not astonished. The apparent explanation is at hand. When it appears and *rages* in precisely opposite circumstances, and in spite of every precaution, we open our eyes and wonder, just as though the unclouded sky should blaze with gleam after gleam of lightning without the subsequent voice of the thunder. In the first case ignorance attempts to *explain;* science, however, waits and doubts, or acknowledges her impotency. The course of the cholera along our Bayou has deepened the mystery of the law, or laws which appear to govern it. It has travelled backwards and forwards, up and down this stream, selecting with seeming design, and without any regard to weather, food or preventive measures, here and there a place or plantation as its victim. The only rule it has followed with regularity is, *rarely to attack,* and *never to* RAGE *upon adjoining places.*

This peculiarity of progress has given rise to various theories. Some think that its attacks are not governed by natural, but by supernatural laws; that it is sent by Deity to particular sections, and to particular places in those sections, as a scourge, exhibit-

ing His power and man's dependence. We confess that in its course elsewhere, and especially along the Bayou, it seemingly exhibited a *sense of selection* similar to that exhibited by the Destroying Angel, who avoided the Israelites and slew only the first born of the Egyptians. But this view of the subject stops investigation. *It makes cholera a miracle*, and its course miraculous.

Others who do not perceive intelligence, see *instinct* in cholera. "The hypothesis of insect life" is based upon other hypotheses which are supported only by vague, and obstruse analogies. It is an attempt to explain one mystery by another still more profound; to elucidate a theory of which we know little, by another of which we know less. As applied to the disease before us, this hypothesis merely says, "Cholera is caused by insects, and its progress is directed by their instincts." Now what do we know about the instincts of animalcules? As yet, nothing.

Others have modified Holland's hypothesis. They suppose Epidemic Cholera to be native to the locality where it rages: that a particular atmospheric condition generates or develops these invisible, intangible and undiscovered creatures. If they be right, how is it that heat and moisture generate and mature these creatures in one section, while in another, *cold* and *ice* are the "*hot-bed*" of their vitality. If Holland be right, how is it that the little natives engendered and developed into a fearful maturity by the heat and the fens of India, can travel to and flourish on the mountains and in the snows of Russia? Do they go through an acclimating process? If so, *when? how?* What other tribe of animals possess the instinct which leads them to migrate to an extreme of temperature directly opposite to that in which they were born? To what other known tribe of animals is their tremendous capacity for flourishing like natives in every clime analogous? A deficiency of electricity, and an increased weight of the atmosphere are the only atmospheric conditions avouched by respectable authority, which are worthy of consideration. *If the vital principle be electricity*, we can conceive how a deficiency of it in the atmosphere may cause its rapid extraction from the body, and thus produce a collapse of the vital powers. We can even conceive how, in passing rapidly off, it might irritate the nervous extremities and cause cramps. We can readily conceive how the absence, or a great diminution

of the electrical or vital principle might leave the vessels of the stomach and bowels a prey to the acids and mephitic gases that inhabit them; and how these unrestrained irritants might puke and purge, and thus start the current of the circulation inwards; and how all this might end in death.

But we cannot conceive how *a deficiency* or *an absence* of electricity, can travel as the cholera-poison travels; or how on one plantation there may be such a deficiency of it, as to cause great fatality, while there are no indications of its excess on the adjoining one.

Any great change in the density of the atmosphere might produce disease. But no regularity has been discovered in this change; and where it has been perceived, neither a new atmospheric element, nor any disproportion in the ordinary elements of the atmosphere was found. Consequently, if this be the cause of cholera, the disease must be produced by the condensation of the air's innocuous elements. For we cannot suppose, in the present advanced state of chemical science, a gas sufficiently ponderable to augment perceptibly the fifteen pounds of air already pressing upon every square inch of man's body, and yet elude all proof of its existence. Nor does this atmospheric condition, admitting its universality, lessen the mystery of the progress of cholera. We cannot comprehend how *this density of atmosphere* can leave India, leap mountains, unchanging and unchanged by the rarified air of their summits, travel in opposition to itself, and select the spots upon which it will settle.

It is as true now as in 1817, "that no condition of physical change in the atmosphere is yet known to us, statical, chemical or electrical," (or animalcular,) which affords even a probable solution of the mystery under consideration. Theories are guesses based upon a partial knowledge of the facts. Now, we would *guess* that the cholera-poison is a compound of two elements; that both of these elements are engendered in the marshes of India; that one of them is a comparatively innocuous fluid or element, and an exceedingly subtle and expansible gas, which, from being in excess, or from the decomposition of the compound as it rises in the air, spreads through the entire atmosphere of the temperate zone, at least through all that portion to which it can be conveyed by means of individuals and of moisture; and by combining with the other element or fluid

or gas which is engendered in the particular locality, forms the poison which produces cholera.

What these two elements are we do not know. Chemists may, however, ultimately discover them, and the antidote to the poisonous compound. Why one of them shall exist or be generated on one place and not the adjoining, we cannot tell; nor will it be told until the elements themselves are discovered; but, admitting their existence, and the poisonous character of the compound, the mystery of the progress of cholera is solved.

Is cholera contagious? This question is generally asked for the purposes of ascertaining the propriety of quarantine, and whether it be prudent to visit those sick of the disease.

We believe that cholera is an atmospheric, that is *an infectious* disease. Hence quarantine regulations cannot always prevent its propagation.

We believe also that it may and does become slightly contagious. Hence non-communication may sometimes retard or prevent its spreading.

If the atmosphere of a place be impregnated with the poison of cholera, a large majority of the inhabitants experience a sort of *malaise* about the region of the stomach and bowels. Should these persons go into the chamber of those sick, especially if it be not well ventilated, and they remain long, this feeling will be augmented. This is easily accounted for. The air of this chamber, impregnated as it is with the effluvia from the secretions and excretions of the patients, must be more impure than that without. For this reason, we think an attack might by such a visit, be excited in a person thus predisposed, who would otherwise escape it.

But in addition to this, we believe, that the choleric poison passes from the body by means of the secretions and excretions, and that this poison, *independently of the choleric constitution of the atmosphere*, may produce the disease in other persons. We do not, however, believe that the contagion of cholera *multiplies* as does that of small pox. On the contrary, it *decreases*. For this reason cholera could not be extensively spread by contagion. Infection must be the usual mode of its propagation.

This view of the subject does not conflict with our hypothesis. The ship Swanton arrives at New Orleans with cholera on board: In a few days it attacks every part of the city. Now our conclusion is that this ship was the medium by which the

travelling element of cholera was brought to the city, and that this element, meeting with its counterpart, the other element, and combining with it, formed the compound, known by its effects to be the cholera poison, pervaded with electrical rapidity the whole atmosphere, and affected those first who were, from constitution or habits, predisposed to an attack. Thus far the disease exhibits only its infectious character. Its contagious might, however, we doubt not, be traced for a limited extent from one person to another, who came into contact with the ship, and the diseased immigrants. The same remarks will apply to this region. The history of the progress of cholera along the bayou proves that it is highly infectious, and that it is not very contagious. But it also affords some ground for the opinion that it does possess the latter quality.

When, however, the infection and contagion are thus combined, it is impossible to prove the existence of the latter, or to fix the limits of either. This can only be done by following the cholera into a pure atmosphere. A medical gentleman from Texas told us that every case of cholera in his village was as distinctly traceable from the person who came there with it, to the three or four others who were subsequently attacked, as though the disease had been small pox. A similar fact was related to us in west Tennessee. A gentleman visited Memphis during the existence of the epidemic, returned to the interior, and died of an attack. Three or four of those who came into contact with him were attacked; and none besides. A physician from Missouri was contending with us that cholera was not contagious. In proof of his position he stated that a negro-man who had been in the habit of visiting St. Louis, during the last summer, in the day, with impunity, became intoxicated and remained all night. He was attacked with cholera, and taken to his home in the country. Although various members of the family visited him frequently, only the servant girl who nursed him was attacked. Now, says the Dr., "if cholera were contagious others of my family ought to have it." This however does not necessarily follow. Such a consequence would depend somewhat upon the susceptibility of those exposed, and the amount of contagion. But if the cholera poison was destroyed or rendered innocuous by passing into and through the body of this man, the nurse, not having been exposed to this poison, would not have had *the specific disease* occasioned thereby. *The mere impurity* of the air of the

room arising from the presence of the sick, might have sickened her, but it could not impregnate her system with the poison. If however, this poison passed unchanged through and out of the body of the man by means of his excretions and secretions, and into the body of the nurse, by means of the confined air, it is plain why she should have the *cholera;* and that she caught it by contagion. For we mean by contagion, the transmission of a specific virus from one human body to another, capable of producing in the second body the same disease it produced in the first.

Infection and contagion are not *necessarily* incompatible. Confusion is caused by sonsidering them as such. Thus it is that while one affirms the entire contagiousness of cholera, because he has seen a few cases proving it to possess this quality, another asserts with equal dogmatism that it is altogether infectious, because he has seen thousands of cases demonstrating the fact. Each is wrong. *It is neither altogether one nor the other. It is both.* The virus may be disseminated through the atmosphere of an entire city or section of the country; and may pass unchanged through one human body into another, and produce in the last the specific disease.

The poison producing cholera certainly has an affinity for water. It travels on the old continent at the rate of a league a month. It leaps the Atlantic at a bound, reaching New Orleans and New York as soon as London. It pursues somewhat the same course here. Again, this poison follows the main lines of human communication. There are apparent and perhaps some real exceptions to these rules, still they are the general rules, and the only ones which with anything like regularity control its progress.

As these are the only rules with regard to the progress of the cholera poison for the correctness of which we would contend strenuously, so there are only three relative to its action upon the system in which we firmly believe. They are the following:—1st. It attacks mainly the nerves of involuntary motion, the great sympathetic and its branches. 2nd. It determines the circulation and seeks the bowels as its outlet. 3d. It is an irritant. We are not bound to explain either of these facts. The fact that they cannot be explained does not invalidate them. The optic nerves alone perceive light—the auditory alone recognise sound—croton oil dropped on the tongue purges—spirits of turpentine taken into the stomach, or applied to the skin, goes to

the kidneys. We know these things, not by any system of reasoning; they are made comprehensible by no explanatory theory; we assert that these agents and medicines act thus and so, from a knowledge of their effects. Thus it is in the case under consideration. The patient moves his head, his tongue, his arms, his legs, his body up to the moment of death. He can also exercise great control over the discharges from the mouth and anus. His brain too is unaffected, and it is the centre, the source of voluntary motion. As the source and the media, the nerves of voluntary motion, do not primarily fail, we conclude that they are not primarily affected. All the injury they may sustain, and all the signs of suffering they may manifest can easily be accounted for by their connection with *the other* nervous system.

The first clause of the second position is self evident. The last will be admitted by those who believe a poison that enters the circulation has to be eliminated. The premonitory sense of uneasiness about the epigastrium, and the almost ungovernable commotion of the intestinal canal, when the poison reaches its inner coats prove the third position. We can not suppose that an innocuous fluid, however great in quantity, could produce such effects, or that the freed acids of the intestine as supposed in our remarks on electricity would leave so little trace of their corrosive properties on the dead subject.

Although we do not hold ourself bound to explain, still it may not be uninteresting or useless to theorize upon the modus operandi of the cholera poison.

The malignant form of cholera is considered by some analogous to congestive fever. The attack in both diseases is made upon the same system of nerves. But the cause of congestive fever merely prostrates, it does not greatly irritate. The congestion may be traced to the nervous prostration, and all the other symptoms, even the diarrhea and vomiting which sometimes supervene, to the congestions. The difference in the prognosis of the two diseases, is this: In the one, if the prostration do not end in death, the patient recovers. Opium controls easily the motions of the alimentary canal; no irritant opposes its remedial action. There being no tremendous determination of the fluids to the bowels—calomel is not washed away from the extremities of the nerves and the mouths of the absorbent vessels—and thereby reaches the secretory system more readily. The fluids being retained, the patient is not depleted in addition to being prostrated.

The most important indication is to give tone to the nerves, so that they may remove the congestion, and quinine, *in large doses*, is in such a case almost a specific.

In cholera, the nerves of animal life are first prostrated, then irritated by a violent poison, and in addition to this prostration and irritation, the patient is depleted by a process which rapidly drains off his vitality, and at the same time retards or prevents the application of medicine to the suffering parts.

Some, whose attention has been directed to its mild form, think that Asiatic cholera and cholera morbus are analogous. The only analogy is in the effects—there is none in the diseases. In cholera morbus the patient always sinks in proportion to the quantity discharged—in Asiatic cholera collapse and death may take place *without discharge*. It is the opinion of some high in authority, that cholera is a fever, and it has been proposed by Dr. Brown to call it "Epidemic Choleric Fever." The Dr. asserts that the degree of febrile reaction is regulated by the degree of previous depression; consequently the fever following collapse should invariably be obstinate. If cholera be a fever, no antidote having as yet been discovered, this must be so. Is it? Our experience responds no. We can now bring to mind but two cases of reaction from collapse in which fever supervened, and both of these died. One clear, indisputable case of recovery from collapse without fever, would prove that Dr. Brown's appellation is a misnomer, and that cholera is not a fever. I can at this moment recollect nine such cases. Dr. Scudday, whose experience is great, informed me that a very large majority of his cases recovered *without fever*, and that since he has quit the use of Cayenne pepper, none, even of those who were collapsed, have had the secondary fever.

The sequelæ of collapse are merely a consequence of the shock given to the system by the struggle through which it has passed, and the treatment to which it has been subjected. The climate and the constitution determine their character. In more northern climates every affection exhibits a higher, a more inflammatory grade of action, and therefore venesection is a common remedy. In warm climates the bowels are "*the escape pipe*" of disease, and the grade of reaction is low. Cupping is a good and common remedy, but no successful physician makes much use of the lancet. A patient recovering from collapse, who would, if in the north, have fever—has here diarrhea or dysentery. The

latter is the customary consequence. Those patients who have recovered from collapse under the use of large doses of calomel with slight ptyalism, seem to us to have convalesced more rapidly, and with fewer secondary symptoms.

But the truth or falsity of the explanations, surmises, speculations and reasonings, do not affect the truth of the positions upon which we base our treatment.

If the nerves of voluntary motion be unaffected, we should appeal *to the will.* This is the first step in form and not the least in importance, in the treatment of an active attack of cholera. The patient should be *commanded* to keep quiet, and resist the disposition to purge or to puke. This prescription properly explained and enforced has saved the life of many a one, who would otherwise have retained no medicine, or made the fatal discharge. A case strongly illustrative of this presents itself to my mind. A negro woman, in the midst of the ravages of the disease, was treated for some abdominal derangement, supposed not to be choleric. She had taken opium and mercury. Her gums had just become ptyalized, and a large blister had just drawn over the epigastrium, as she told us that she must have a passage, and thought it would be a very loose one. We examined her abdomen and found it full of fluid. Reflecting however that it might possibly be wind, that we were too much inclined to see cholera in every case, we directed her to get up to the pot, and if the first of the passage proved to be as thin as she expected it would, to stop discharging it. She did so. The discharge was a few table spoons of "pure rice water," and the disposition to purge, and the distention of the abdomen were undiminished. We then told her *not to puke or purge*, that a free discharge would in all probability kill her. She obeyed with great difficulty and suffering, and being aided in her efforts by the soothing power of opium, and the astringent power of lead, she continued to do so, until the corrective, and excito-absorbent power of calomel had time to exert itself. *Then* the fluid gradually disappeared, and the disposition to evacuate passed off so completely, that she had to take purgative medicine freely.

If the cholera poison act by irritating and debilitating, or paralyzing the nerves of organic life, *the first sign* of its action should be met by *sustaining* these nerves, and rendering them *insensible* to it. This is the second indication.

If, under the influence of the poison, the absorbent vessels of the

alimentary canal *become inactive* or *reverse their customary action;* and the secretory vessels of the same organ *overact* or *become mere exhalents*, a third indication is, to oppose this influence, and often it has been successfully exerted, to correct the derangements produced. The great agents for effecting these objects are opium, sugar of lead and calomel.

There is no remedy which can put the nervous system so quickly, so completely, and so permanently under its influence, and at the same time neither destroy or impair its vitality, as opium. This drug, or its preparations, is powerful, it is universally known, in restraining hemorrhages from all parts, and especially from the bowels. It is also known to be peculiarly powerful in controlling their peristaltic and reverse action. These acknowledged facts being true, opium must certainly be a mighty agent in resisting the onset of the cholera poison upon the nerves; and in preventing, and after the commencement, in arresting the puking and purging which it produces. Why then the opposition to its use in Asiatic cholera? It springs from its not being used *in time in the proper doses.*

After having seen a great deal of cholera and a great diversity of practice, and considered the point retrospectively, we believe that no one will die of cholera who is treated properly in other respects, and CAN *be*, and IS put under the influence of opium.

If the nervous system cannot be reached or affected by it, it will of course be of no avail; and so it will be with all other remedies.

In such a condition a quart of brandy will not intoxicate, nor will a hundred grains of ammonia, camphor and cayenne produce any general effect. Or if they do it will be very evanescent, a mere bubbling up of the remnant of vitality. This is admitted, and yet every physician who has administered opium freely without success, thinks his patient died under its influence; whereas it was for the want of that influence.

This mistake is accounted for by the fact that every patient in collapse has the appearance of being narcotised. We have heard of persons being "scared into cholera." Fear may act as the exciting cause of an attack. We have never witnessed even this. We have seen individuals afraid that they would have the disease, and one who seemed "scared" after the attack had manifestly begun; but we have never seen a person in the collapse of cholera manifest a fear of death.

The choleric poison seems to impress the attacked with a sort of infatuation. Tell such an one that you are thus and so affected, he will express the greatest astonishment that "a man of your sense" should neglect such a warning, and within the next hour will himself slight the same warning. Hence the difficulty in making persons believe they have or have not cholera. Does any one suppose that the neglect of premonitory symptoms is willful; that the warned believes in the warning?

In collapse, this infatuation increases into that incapacity for concentration of thought, of prolonged attention, that torpor of mind, which characterize the effects of opium. This condition deceives the practitioner, and leads him to think the patient is under the influence of the drug.

Again.—It is said that one who goes into collapse after taking opium largely, never reacts. This says nought against it. If, in despite of all the power of the most potent remedy, cholera advances from the premonitory to the real, and from the real to the collapse stage, it is not reasonable to presuppose that any less powerful and less appropriate remedy will arrest it and relume the glimmering spark of vitality.

But if the objector means to affirm that no collapsed case recovers in which opium has been freely administered, we join issue with him by affirming that it has been thus administered in almost all the cases of this kind we have ever seen recover.

It is stated in the books as a peculiarity of Strychnia that it affects first the affected part. This is no peculiarity. The medicine which acts on the system at large and does not manifest this so called peculiarity is an exception. In pneumonia, tartar emetic will neither puke nor purge. In hemmorhage from the womb, in dysentery, in nuralgia, or any acutely painful affection, opium is borne with impunity and without effect, in doses, which would completely narcotise a healthy person. Its action is diverted from the brain, the only organ it can directly injure, by the disease.

In cholera, a system of nerves is affected which does not derive its power from the brain—but from itself. If the ganglionic nerves derived their power from the brain, the poison of cholera would have to act upon, and impair or paralyze this organ before it could impair or destroy their power. But the functions of the brain are not directly destroyed or impaired. Hence we conclude that opium, and we might add other remedies, will ex-

ert its curative power upon *the diseased nervous system* and control that, before it begins its baneful action *upon the one which is unaffected*, and by this time it is diffused through, or has passed out of the body.

But, whether this be so or not, the fact is, that in cholera, very large doses of opium may be administered with great advantage, and are borne with entire impunity.

The sugar of lead is a powerful adjuvant. It acts as a local sedative upon the irritated extremities of the nerves, and astringes the relaxed exhalents, not only at their intestinal extremities, but throughout their course.

By thus acting it opposes the action of the choleric poison, the tendency of which is to irritate these nerves and relax these vessels. There is no remedy in general use, the dose and danger of which is so much misrepresented. I have given it in large doses, say from five to ten grains, every few hours continuously for several days, in hemmorhages from the womb and other affections, where the whole quantity was retained, without the least detriment to the patient.

The books say, sugar of lead is chemically incompatible with calomel. This is a mistake; at least after they have been taken into the stomach. If any one doubts this, let him take a dose of the last, combined with enough of the first to prevent its acting upon the bowels; methinks, before a week has elapsed, he will, with a flowing mouth and a swoollen tongue, mumble out a curse upon his incredulity.

The two preceding remedies, notwithstanding their great importance, are, however, mainly intended "to hold on by," to prevent the waste of the nutritious fluids, to keep the waning vitality "in statu quo," until NATURE, aided by *calomel*, can eradicate the disease.

Nature is frequently competent to correct its own derangements after the attack has been arrested by opium and lead, or similar combinations. This deceives some into the belief that other medicine is unnecessary. Patients sometimes recover when calomel is alone used. This deceives others into the belief that opiate and astringent medicines are inexpedient. This disposition to extremes, these partial views, increase the reigning confusion. "*Tutissimus ibis in medio.*" Opiates and astringents are primarily important. They act quickly. Give them, therefore, for the purposes specified, but do not forget that calomel is

the only *curative* remedy in cholera. It fulfils the most important indication—*it corrects the action of the absorbent and secretory vessels of the alimentary canal.*

Let the physician keep this in mind. Let him forget, for a moment, that there are such organs as the liver and salivary glands, and that calomel affects these organs. Let him gaze upon the many million vessels of the bowels, with patulous mouths pouring their contents and draining the fluids of the body into the great cavity which they line, and recollect that calomel alone has *a direct* tendency to make these vessels act properly, that it acts mainly by contact, and that, consequently each vessel will be benefitted by the application of a grain, or of some fraction of a grain. Let him also recollect that the difficulty of effecting these objects is indefinitely augmented by the speedily threatened, or already complete derangement of the very vessels upon which the medicine must first act, and that the circulation cannot be restored, nor the secretions generally, especially that of his pet organ, the liver, until these vessels do act rightly; and *that then*, although their restoration would be greatly hastened thereby, they would be restored, independently of any direct action of medicine.

Let him, in addition to all this, remember that the nerves, and the coats of the bowels, as well as those of the vessels implicated, have already become, or are rapidly becoming, insensible to the action of medicine, and he will be convinced that the largest amount of calomel, compatible with the future welfare of the patient, should be thrown into contact with the disordered capillaries.

We give calomel in cholera for the same purpose that we give it in ascites. We administer alterative doses in the latter, because that is the speediest way to bring it into contact with the capillaries of the peritoneum. We administer large doses in the former, because our time is limited and we can throw it into direct contact with the capillaries of the alimentary canal. A large dose is less apt to salivate. It will generally purge in due time, and, if it do not, the secretions being more certainly restored, a purgative may be administered with less risk.

One of the indications mentioned *is to sustain the nerves.* This is best done by rendering them insensible to the action of the poison, and by putting them under another and safer influence. Opium effects both of these purposes. It is both narcotic and

stimulant. Notwithstanding this, the temptation to give something directly stimulating is very great. Debility is the first symptom that alarms us, and, as it increases, we feel almost irresistibly inclined to oppose it by camphor or pepper, brandy, ammonia or quinine. The combination of these, with the other remedies specified, was once our favorite practice. Experience has led us to diminish their use. In the early stages of an attack, the remedies recommended are amply sufficient. When the case becomes so urgent that the loss of a little time may prove fatal, stimulants are dangerous; we have seen that little precious time lost by their tending to excite vomiting. They are all local irritants.

When vomiting is *threatened*, or has begun, we even refuse to give opiates, or lead, or any thing with a disagreeable taste; discard kreosote, clove-tea, and all such stuff, and depend entirely upon calomel and ice, giving the narcotics and astringents by the rectum. The only condition in which we *now* use stimulants is collapse, when there has been no vomiting, or the vomiting has entirely ceased.

Dr. Williams, a prominent physician of this place, had a very plausible theory relative to the mustard and salt emetic, which was once so popular. It was, that this mixture caused the stomach to discharge a thick, ropy mucus, which so lined the stomach as to render it impossible for medicine to reach its inner coat, consequently, it was useless to give any until this formation, which he considered peculiar to cholera, was removed or destroyed. The mustard and salt do frequently cause the discharge of a viscid mucous; but lobelia, when repeatedly administered, does the same thing in every disease, (so the Thompsonians brag,) and this formation is not found in the stomachs of those who die of cholera. Hence, we conclude, although it is sometimes secreted and discharged without the emetic, that it is not peculiar to this disease, or one of its regular pathological phenomena, but that the medicines mentioned cause it to be secreted, thereby producing the very evil they are extolled for removing.

We have never seen any beneficial effects from emetics in cholera, unless the patient had just eaten, or had undigested food in his stomach; and then salt and water is sufficiently powerful.

We have never seen the sensibility of the stomach restored by the mustard emetic. We have, however, seen this substance discharged by the rectum as well as by the mouth, in five mi-

nutes after it was swallowed. We saw one patient who was not sick much when the emetic was administered, and who vomited quite freely, eject a considerable quantity of the mustard twelve hours afterwards, and then have a long, singular and almost unmanageable attack. It is but justice to Dr. Williams, whose authority upon Lafourche is high, to say that further experience shook his confidence in this remedy.

In prescribing the remedies approved, we should proportion the dose to the emergency of the case. Our calculation relative to this matter should be based upon the condition of the patient and the form of cholera prevalent in his immediate vicinity. The facts, that either cholera mild, or cholera malignant generally prevails unmixed upon a place—that the first cases reveal the type, and thus with the state of the patient make known the time left for effort—aid us greatly in making them.

In the early stage of the mild form of cholera, one or the other of the following pills after every, or after every other loose passage, form as suitable compounds as can be given:

No. 1. ℞. Pulv. opii grs. vi.
or Sulph. morph. gr. iss.
Calomel, ʒss. M. ft. pil. No. 6. Dose, 1 to 6 pills.

No. 2. ℞. Pulv. opii grs. xii.
Acitat. Plumb. ℈ii.
Calomel ℈iv. M. ft. pil. 8. 1 to 4 at a dose.

As the period of rice-water evacuations or collapse approaches, from three to six of the first, and from two to four of the last, should be given at a dose.

The physician who fails to give our doses is pursuing as different a course as though he gave different medicine.

If the stomach be irritable, apply mustard, and give nothing by the mouth but calomel with ice. In place of the other ingredients, give the following injection:

℞. Pulv. Acat. Plumb. ʒi.
vel. G. Kino ℥ij.
Aq. Fontan. ℥i.
M. et Adde.
Tinct. opii ℥ss.
The whole for one injection.

The calomel and the injection should be repeated as soon as returned, until it is certain that a full dose of each has been re-

tained. Their subsequent administration must depend upon the judgment of the medical attendant.

In the highest grade of malignant cholera, that in which the poison kills as by a shock and without discharge, we can, as a matter of course, suggest no remedy. The only chance is *prevention*. For this purpose we can only recommend prudence in diet and deportment, and removal or "scattering," so soon as the first case occurs. All this would be advisable whenever the pestilence descends and whatever its form. We are highly in favor of prompt medication, but *premedication* does not "strike our fancy." We know of no *antidote* to cholera. The only remedy likely to prevent an attack is calomel. There is doubtless a period of incubation and a period of effort on the part of the system to resist or discharge the poison. Could we foretell the latter period, we might, by aiding the nervous system and the secretory and absorbent vessels, just in advance of it and during its continuance, prevent an open attack. But we know not how to foretell this period. The attempt to practice upon such foreknowledge would simply be to practice by the roughest sort of guessing.

If we give medicine too early, the debility which follows all unnatural excitation would leave the system an easier prey to the poison. One dose of calomel could only excite the liver to temporary effort, speedily leaving it in its original, or in a more debilitated condition. *Might not its purgative power, unrestrained, aid the poison in determining the fluids to the bowels?* No one, we would have supposed, would be rash enough to advise a healthy person to subject himself to "a mercurial course," to be continued throughout the reign of the epidemic. The case already related to show the power of the *will*, proves that salivation, *exactly at the right time*, does not always prevent an attack.

A similar case occurred in Thibodaux. A negro man told us his passages were copious, thin as water, and frequent. We prescribed six No. 1 pills, to be taken at once. He convalesced, and we paid but little more attention to him. Three or four days after the administration of the pills, we found him slightly salivated, somewhat feverish, and purging again, his passages being as thin as water, but small and not frequent. He was directed to take 20 grains of Dover's powder immediately, and 10 grains after each stool. In a few hours he was in collapse.

In this condition he took about 240 grains of calomel, and recovered without fever or an increase of salivation.

These cases seem to show that calomel may cure what it can not prevent. A number of fatal cases occurred at Bishop Polk's, subsequent to the ptyalism of the patients. A mixture, composed of quinine, compound tincture of capsicum, laudanum, and brandy, was then tried as a preventive measure. The Bishop firmly believes that it developed the disease in some who would otherwise have escaped an attack; and in others it determined to the stomach, thereby provoking the earlier appearance of that most unmanageable symptom, *vomiting*.*

Dr. Kittridge gave all his negroes a dose of calomel, as soon as the cholera attacked his place. He lost five or six negroes. It then passed off entirely, and in eight or ten days reappeared. He then gave no calomel in advance of the attack, and lost the same number. During both periods he gave to all, on going to bed, a tablespoonful of charcoal and half a teaspoonful of Cayenne pepper, in half an ounce of brandy. The Doctor says, if cholera were to attack his negroes again, he would remove them immediately, and give to every one alterative doses of mercury for several days. He previously gave to the grown ones ten grains of calomel.

Mr. Donaldson's statement is worthy of consideration in this connection. "Abdominal uneasiness," even where the disease is raging, does not alone justify the assertion that the individual has cholera. If this were the case, almost every man, woman and child in New Orleans, during the Christmas of 1848, might have been correctly reported to be laboring under an attack. The same report might have been made at one time about the inhabitants of Thibodaux and its vicinity.

This symptom is frequently premonitory of an attack, and should be closely watched, especially when the actual cases manifest malignancy; but it sometimes exists days and weeks

* We deem it our duty to state that *we* suggested this prescription to Bishop Polk and his physicians. Happening to be there when the epidemic was raging, and finding the cases so very unmanageable, after the attack was declared, we advised the trial of *premedication*. We offered the above mixture as a *mere suggestion*, stating frankly at the time, that we had no experience to refer to, and that we had serious doubts as to the value of any sort of *preventive medication*. We were not surprised at the result; but we still think that, under the circumstances, it was worth the trial.—[Ed.

before the attack, and frequently passes off without medicine and without producing an attack.

To relieve a patient of this uneasiness does not, therefore, justify the assertion that he has been cured of cholera, or even that the treatment has prevented an attack. "Out of 12 or 15 who took medicine at one time simply for abdominal uneasiness, several began, in from one to five or six hours, to purge, and became dangerously ill." Tannin is an irritant astringent. Camphor and pepper are local irritants as well as general stimulants. Calomel, in a dose of 20 grains, is a purgative. Might not this purgative and these irritants have developed, or hastened the development of the disease? Might they not have determined the circulation to the bowels? We ask these questions in the spirit of an honest inquirer after the truth.

In view of our inability to premedicate, it is exceedingly fortunate that the grade of cholera now under consideration, the one in which premedication alone can save the intended victim, is very rare; so much so, that we sometimes doubt whether it ever occurs. We are inclined to believe that *every one* has *some* premonition, which, properly understood and considered, would lead him to apprehend an attack. Hence it is, that the ignorant and the inconsiderate always suffer most.

Well treated plantation negroes should suffer less than any other class of the community. Exercise keeps their frames attuned to the utmost vigor; their habits are regular; their diet plain, substantial and healthy; and yet they suffer more than their puny brethren of the kitchen, or the enervated inhabitants of the mansion-house. Civilization makes us selfish and considerate, and this selfish considerateness makes us keenly alive to our own importance and the importance of living a little longer, not for our own benefit, but for the benefit of our families, our country, and the world. Hence the enlightened, when warned of surrounding danger, become "Argus-eyed," and not only the sense of sight, but all the other senses, become heightened. They taste more cautiously, hear more acutely, make more use of their nose, reflect more strongly, and act more promptly. Whereas the less reflective, the more ignorant, can scarcely be persuaded that the very symptoms which they have neglected with impunity a thousand times before, are now the precursors of danger.

As such, they will not avow them, until *the sense of feeling* forces an avowal. At least one-third of the negroes who called for a

prescription in time, during the ravages of the pestilence, with every explanation previously given, and the corpses of their friends and relatives lying around, silent and solemn witnesses to the fatality of neglect, *apologised* for troubling us, by saying:— "We would not have come in so soon but for your imperative orders."

This apathy is further accounted for by the fact that all negroes are fatalists, and this fact renders the idea that they are scared into cholera perfectly ridiculous. *The worse it rages, the less they regard it.*

A patient attacked by the second and most usual grade of malignant cholera, thus announces the attack. "I got up well this morning, have just had an operation; it was of a yellowish color, of the ordinary size, and about the consistence of mush. I feel some uneasiness about the stomach and somewhat weak." This patient's pulse may be slightly depressed, and his extremities may be a little cool; but there will generally be nothing alarming in his appearance, in his manner, in the tone of his voice, or in the symptoms stated, unless you connect them with the preceding and surrounding cases. Judging by these, this patient will soon have a second discharge, which will be thinner. This will put his life in great jeopardy, and a third, which will speedily follow or collect in the bowels, will inevitably throw him into collapse, a condition in which under the most successful practice, the chances are as eight to one against his recovery. *And all this will occur within two hours.*

The time of this announcement then is the time for effort, the time for medicine. The patient should be made to lie down, quiescence commanded, the power of the will invoked, mustard and hot bottles applied, and *the largest safe dose of the most suitable medicine immediately administered.* All our coolness, all our courage, all our firmness must now be summoned. We must assume responsibility, and reject all nice discriminations. The whole burthen of the treatment should be thrown upon the one dose. We should not calculate upon giving another with success, if this fail.

The writer would as soon give a drop of water, as a grain of opium and five grains of calomel; or any ordinary dose of any medicine or mixture, in such an emergency. Six of the No. 1, or four of the No. 2 pills, or 40 grains of calomel, and

the injection, would be his prescription for a grown man. We have seen these milder means tried by physicians, whose cry is, "Don't over-dose," "Discriminate," "Discriminate," and we have also seen their patients pass from the curable to the incurable, from the premonitory to the collapse stage, AND DIE, while the worst effects of our plan could only be stupor and salivation.*

Having given, in part, our own speculations and views relative to the progress, pathology, and treatment of Asiatic cholera, we proceed to give, without unnecessry comment, the naked facts connected with its appearance and progress along the Bayou Lafourche.

In order to serve the truth we have addressed personally, or through friends, the following queries to all those within our vicinity, whose families or negroes suffered from the ravages of the pestilence.

1st. By what means did the cholera reach your plantation?

2d. When did it attack it, and in what kind of weather?

3d. How long did it last?

4th. What form of cholera was it?

5th. How many were attacked?

6th. How many died?

7th. What was the general plan of treatment?

8th. How many cases collapsed?

9th. How many of these recovered?

10th. How many persons lived on your place?

11th. Did any of your *adjoining* neighbors suffer from this disease?

12th. Did it prevail on your plantation, when it travelled over this country before?

The following are *substantially* the statements taken down in answer to the queries:

A slight geographical sketch will make them comprehensi-

*In no form of Asiatic cholera should the patient be starved. Some nutritious fluid, and we know none more suitable than good rich chicken soup, should be thrown into the stomach or bowels, whenever great debility exists and it can be retained. If the patient be thirsty, give him iced soup. If he be taking liquid stimulants, dilute them with soup. If he vomit, give it by the rectum; and in collapse, when the purging and vomiting have ceased, *pour it in* profusely.

ble to those, who never visited this beautiful, but monotonous region, in which sugar cane matures, the live oak and magnolia are indigenous, and the orange tree buds, blossoms, and "brings forth fruit unto perfection."

The bayou *meanders* from the Mississippi to the Gulf through a soil, whose surface is unbroken by a hill. Along either bank a road winds, and along these roads are strewn the mansions of the planters, and the cottages of the Creoles; the sugar houses, and negro-cabins are generally in the rear.

The parts contiguous to the bayou resemble prairie, no trees being left or planted except for ornament. The plantations terminate behind in woodland and swamp.

Those who have seen a village located in a cleared plain, with but one street, and that street coursing along the bank of a crooked creek or river, will have a pretty correct idea of the position of the settlements on each side of the Bayou Lafourche. Those who have seen what is called "the coast" on the lower Mississippi river, by allowing for the difference in the width of the streams, will have before their mind's eye, the precise picture we are attempting to portray.

Dr. Rouannet's Statement relative to Jacques Babin's and Duel's places.—Jacques Babin lives eight miles below Thibadoux. His wife was attacked with cholera, and recovered. A few days afterwards two negro women were attacked—then M. Babin, himself—then his son, who visited him, and subsequently a black man and a black woman. All these died. M. Babin and his son took nothing. Opium in small doses and wine were given the others. External stimulants were also used. Two black girls, one belonging to an adjoining neighbor, the other living on the opposite side of the bayou, who nursed these patients, died. A grandson of M. Babin visited his father; he returned home, was attacked and died. A daughter-in-law of Madam Babin visited the sick, was attacked, and then removed—she recovered.

Calomel was only used in two cases, one of these recovered. It was given in small doses, (5 to 10 grains.) No collapsed case recovered. No one in the immediate vicinity was attacked who did not visit the place. All these cases occurred within

eight or ten days. M. Babin's was a small Creole family. The disease was of the malignant form. All the deceased died within a few hours after the attack began, except the second black girl; she lived four days in collapse. This occurred in May. About four miles above M. Babin's, connected by an uninterrupted series of Creole settlements, lived Mr. Duel, the head of a small family. On April the 10th he was attacked, and died. The cholera was of the mild form. Several other physicians saw and treated some of these cases, but Dr. Rouannet is cognisant of the facts.

Two miles above Duel's and connected by a similar line of settlements, is the plantation of Col. Key.

Colonel Key's Statement.—The negroes first attacked were engaged in "sugar rolling," and had no communication with the bayou or Thibodaux.

The first case occurred on the 29th of December. The patient was a young negro man subject to diarrhœa. He died.

The weather was then misty, cloudy, and warm for the season. About the first of January it changed to cold and CLEAR.

The cholera continued from December 27th to January 10th. Within this period there were about 20 premonitory attacks, and three young and likely men died.

In April the cholera reappeared. Two men and a child died within the first week. About 20 premonitory attacks again occurred. *The weather was delightful.* The disease appeared again in the last of May; an infant of the Colonel's and a middled-aged negro man and woman died. Two other of the Colonel's children were attacked about the same time, and about twenty premonitory attacks again took place among the negroes; in all 60 or 65 attacks and 9 deaths.

It was the mild form of cholera. At first, opium, astringents and calomel were mainly depended on. In its subsequent visitations a modification of Dr. Cartwright's old prescription* (2 to 4 of his pills with half the prescribed amount of cap-

* The following is Dr. Cartwright's prescription, published in 1833.

Rp. Calomel;
Pulv. capsic. ā ā grs. xx;
Pulv. camphor, grs. x. M.
Make into 7 pills, or 1 powder. S. The whole for a dose.

sicum) was resorted to in the first stage; if the case proved obstinate, opium, &c., were given. Every means were taken to prevent the second and third visits of the epidemic. The quarters were cleaned, the cabins white-washed, and on its appearance in these instances, the negroes were "scattered" or "thinned."

Only two children and very few women were attacked. All fared alike.

There were about 150 on the place; none of the *adjoining* neighbors had the disease. This plantation was visited by the cholera in 1832 or '33.

Thibodaux.—Col. Key's residence and negro quarters are two miles below Thibodaux, and the upper part of his plantation is connected with it by a series of dwelling houses. The first cases of epidemic cholera occurred here the 26th of December; the last about the middle of October following. Its two principal attacks or visitations were from the 24th of January, to the 3d of February, and from the 2nd to the 14th of October. I learn from my books that cases occurred the last of May, the last of June, and the middle of July. The form of cholera was mild; two cases appear to have been malignant. The number of attacks and deaths are not known—neither were numerous.

How the poison reached here we cannot tell, nor are we disposed to deny that it has remained ever since its arrival, embracing every opportunity created by exciting causes to exhibit itself. Its last appearance was attended by the following circumstances: Mr. Ayres, a respectable mechanic of good habits, was working on a plantation three or four miles up the bayou, on which there had been no cholera. He was attacked with diarrhea, had fourteen passages, then got on a horse and rode to town; was almost exhausted when he arrived, began to vomit and continued to purge until he collapsed and died.

The next morning an old negro man who waited on him, went into collapse without any known warning, and died. A female who came over to see Ayres was also attacked the same day, and the day after a man who visited the old negro; a fellow servant of the old negro was also attacked within ten days.

During this period, other cases, apparently unconnected with these, occurred in different parts of the village, but there was only one death among these, and I suppose the cases seemingly traceable to Ayres, constitute at least one-third of all the indisputable cases of cholera which have occurred since his death.

Ayres died in a house the former inmates of which had been particularly afflicted by cholera in February. The owner was attacked there, but died in a different part of the town; and three out of his five servants had it in this house. One of them died. These attacks took place successively, and were traceable from one to the other.

Judge Guion's statement.—On the 26th of December a boy seven years old, who stays about the house, was attacked. He had not been from home. His symptoms were vomiting, purging of rice-water, and cramps. This was the first case.

A second case occurred about the first of January. A negro man was the subject. He had visited town. It is not known that he came into contact with any afflicted persons. He had no symptom but "rice-water purging."

These cases were treated with opium, calomel, assafœtida and red pepper tea, in large doses. Both recovered.

No others were attacked at this time. *The weather was misty and murky.*

In the latter part of January, two or three cases occurred, and one died. *The weather was cold and clear.* About the last of February, two or three others were attacked; all recovered. Cartwright's old prescription was now adopted in full. The weather was rainy. About the 10th of March, two were attacked; both recovered. The disease was of the mild form. Total of attacks, ten; one death; eighty or ninety on the plantation.

Judge Guion's plantation adjoins Thibodaux. His residence and negro cabins are from a quarter to a half mile from its upper boundary. During the periods in which the cholera appeared at the Judge's, only one or two cases of it had occurred in the upper third of the town. The disease had mainly raged about its centre.

Two large plantations and a line of dwelling houses intervene between Judge Guion's and Bishop Polk's.

Bishop Polk's place.—Mr. Boatner's, the overseer's, statement.—The first case of cholera on Bishop Polk's place occurred the 3d of May; the last on the 10th of June. During the prevalence of the epidemic there were several showers, and one heavy rain with a good deal of wind; but, as a general thing, the weather was very fine.

The disease was of the malignant form. There were 356 negroes—273 had cholera, 69 died; THREE COLLAPSED CASES RECOVERED.

In addition to the *primary* attacks referred to by Mr. Boatner, 220 of which took place in the first two weeks, there were not less than 50 or 60 *re-attacks*. I do not mean by *re-attacks*, *relapses*. I apply the term to those who had been treated for cholera, whose bowels had been regulated, and who were dismissed as cured, and remained so from one to two weeks. The re-attacked generally died speedily. This was the main peculiarity of the cholera at the Bishop's. It seemed as though the poison never would exhaust itself. It *attacked* and *re-attacked* the victim. It raged doubly as long as it did at Mr. Bibb's, and three times as long as the same form did on any other plantation. There were about ten cases among the whites, and one death. Adding these and the *re-attacks* to the number of primary cases, the sum total of cases would not be much less than the whole population of the place, which was about 375.

Only three collapsed cases recovered, but several others reacted and died of the secondary fever; and some that did not collapse at all died of dysentery or some other secondary affection.

The small number of recoveries from collapse is attributable to the grade of cholera. This statement tallies precisely with Mr. Bibb's, which says that only 2 out of 30 collapsed cases of the malignant form recovered, whilst 7 out of 49 collapsed cases recovered, after the disease had assumed a milder form.

It was malignant from the beginning to the end at Bishop Polk's. The first recovery from collapse was within the first two weeks; the second was within the next two, and the third within the last two weeks.

The disease there was peculiarly malignant. The first stool, not at all loose, put the patient in danger; the second, however small, rendered his chance for recovery very doubtful; and the third, unpreceded by medicine, inevitably precipitated him into collapse. Some collapsed without discharge, and some when first found were beyond the reach of hope.

The report of the following cases, noted at the time, will be the best confirmation of these remarks:

May 3d.—The first case, a child two years old, died in an hour, without prescription.

May 5th, 2d case.—Todge, a negro man, worked till 12 o'clock, without complaint, was found in collapse by Mr. Boatner at half-past 1 o'clock.

May 5th, 3d case.—Matthew, a negro man, was attacked at 9 o'clock, P. M., found by Dr. Williams and myself in collapse at 10 o'clock, P. M.

May 6th.—Tama, a negro woman, quite delicate, took four or five of Cartwright's pills in the morning; at 11 o'clock took mustard and salt emetic. I found her in collapse at 12 o'clk.

May 9th.—Tack Primus, a negro man sixty years old, but healthy, walked to the hospital at 10 o'clock, apparently quite well; says, "he feels bad about the stomach; has not had a passage for more than 24 hours, and the last was natural; does not feel like having one; his bowels are rumbling a little." took a dram of No. 6 and brandy; continued to walk about until 11 o'clock, A. M., and had no discharge. At this time he fell in my presence, as though shot through the heart. I examined him. He was in complete collapse. Purging and vomiting of rice-water then began. He died in a few hours.

May 9th.—Jim, 12 months old, found in collapse, with two worms in his nose, died about 6 o'clock.

Apless—walked to Hospital at 6 P. M. complained of sick stomach, said she had heaved several times and vomited some, she took medicine; at 8 o'clock I found her on the verge of collapse. She then discharged a pot-ful and immediately sunk, dying at 4 o'clock.

May 23.—Sylvia, a young woman, a confirmed convalescent, being well more than a week, had a rice water discharge at 5 o'clock, P. M. Collapse is beginning. This woman had no other

passage; vomited once or twice; threw up scarcely anything; died about 9 o'clock, P. M.

May 24.—Chio, a boy about 12, got up well this morning, went out to have a passage—says it was thin, and had a worm in it. Shortly after had another. Dr. Halsy prescribed for him at 8 o'clock A. M. Collapse had begun. He died within four hours.

Haywood, a boy five or six years old. At quarter of 6 A. M. got up, vomited a very large worm, and had one large watery passage. At twenty minutes after 6 A. M. he was pulseless and cold.

Chloe, a healthy young negro woman, walked to the hospital to procure medicine for her child; said—"I don't feel exactly well myself; have some uneasiness about the bowels; my last passage was natural, &c." I gave her a little Dover's powder and blue mass. In twenty minutes she had a small rice water discharge and immediately collapsed, vomiting of rice water and worms then began. This woman recovered.

These cases are not selected on account of their violence. They are as mild as any that occurred.

The disease respected neither age nor condition. The young and robust succumbed as rapidly as the old or diseased. The attacks generally commenced between day break and 2 o'clock, P. M., rarely in the night. Almost all discharged worms; some in great quantities. Treatment—Opium and lead in tolerably large doses—Calomel in moderate doses. The mustard and salt emetic—the cold dash—the hot salt bath, and every kind of external and internal stimulant were occasionally tried. Towards the last tinct. of assaffœtida and spigella were regularly administered to the children.

W. Blount lives about two miles above Bishop Polk. Col. Allen's plantation intervenes between their residences. January 14th; his daughter, a young lady of twelve or fourteen, had cholera. The last of May a negro woman; the last of June or first of July a negro child; and on the 20th of July, Mrs. B. had it. The child died suddenly; being in collapse before it was known to be sick. The other cases were of the mild form. Mr. Blount has ten or twelve in family. Two or three miles above Mr. Blount's residence, and connected with it by a line of settlements, is the plantation of Mrs. White.

Mrs. White and Doctor Doncereux's Statement.—The cholera reached here by means of the atmosphere. It prevailed in all kinds of weather. It lasted two or three months. It was of the mild form; fifteen cases, five serious ones; three deaths. Opium in small doses frequently repeated, and calomel in full doses, were the main medicines resorted to. None of the adjoining neighbors were attacked. The cholera prevailed in this place in 1832 or '33.

Having travelled fourteen miles on this side of the bayou, we will go to a ferry about two miles further up, cross over and travel down the opposite side. A little above the ferry, is the plantation of Mr. Hymel.

Mr. Hymel's Statement.—It is not known how the cholera reached here. Every means were used to prevent its appearance. The negroes were not exposed to it. The first case occurred about the 1st of February. The weather was then very fine. The epidemic continued to break out at intervals up to the 12th of August. At first it seemed to be mild. Towards the last the cases were of the malignant form; there were fifty on the place; forty-five were attacked, ten died; eight blacks and two whites. They were treated by Drs. Williamson and Gatewood. External stimulants were applied, internal treatment not known. An adjoining neighbor had a few slight attacks. On a plantation behind Mr. H. there were two cases. Both fatal. (This back plantation is separated from Mr. H's. by swamp and forest.) The cholera prevailed here in 1832, or '33; two or three white persons died. Two miles below Mr. Hymel is the plantation of Mr. A. Téte.

Mr. Téte's Statement.—My negroes had not been exposed to the disease; they were attacked on the 13th of January. The weather was unpleasant, but not rainy. The cholera raged here about one week; it was malignant; there were fifty-five on the place; eighteen were attacked; twelve died. They were rubbed with camphor, and mustard was applied. They were dosed with laudanum, calomel, peppermint and Cannon's mixture.* None of my adjoining neighbors were at-

* A nostrum prepared by an apothecary in New Orleans and sold in great quantities.

tacked. I do not know whether or not it attacked this place on its previous visit to this country.

Nearly three miles below Mr. Téte, lives Mr. Osborne.

Mr. Osborne's Statement.—An Irishman visited two of my cabins at night, or a little before day, February 13th, and vomited what was supposed, from the smell, to be liquor. He immediately went away, and was found some hours after in a collapse by the road side. I had him carried to a shantee a mile back. The negro, in whose cabin he tarried the longest, did not have cholera at all. The other into whose house he went was among the first attacked. I was with the Irishman a good deal, and had some time subsequently only a slight attack. The negro who nursed him mostly escaped entirely. From the shantee he was removed to Mr. Broux's, an adjoining neighbor's, sugar house, where he died. A good many of Mr. Broux's negroes were about him; none of these were attacked. Mr. Broux was attacked with vomiting and purging the next day, but he is subject to such attacks. February 13th, at 11 o'clock in the forenoon, my foreman, who was one of my healthiest and strongest men and lived in the best cabin, was attacked. The Irishman had been in his cabin a few moments, but he had not touched or had any thing to do with him.

I had forty-one negroes, thirty-seven or thirty-eight were attacked, nineteen died—six men, seven women and six children. Two or three of these were infants. The others were from two to nine years old. Only one collapsed case recovered.

As soon as the disease appeared, the negroes were removed a mile back, but were brought to the old quarters as soon as attacked. After it had raged awhile, they were moved below Thibodaux. One was attacked there and died; two remained at home, one of these escaped entirely; the other was the last that died.

The disease was of the malignant form; average time from attack to collapse, from one to two hours; fifteen of the deaths occurred within the first eight days; one died salivated, and it is thought without discharge. The last case died on the 13th of March. This was the only one among the negroes

which appeared to be of the mild form; had a diarrhea a day or two before death; took calomel and it acted well. This patient died warm and perspiring.

All the whites had mild premonitory symptoms and took medicine. Cartwright's old prescription was first tried. "It had no more effect than so much water, even when given early." Opium, calomel, camphor, pepper, &c., were then used in premonitory cases.

"Composition powder" was used in two mild cases. In one it was thought to have a good effect, in the other it did not. A few days prior to the breaking out of the cholera, the weather was misty. The day it broke out *was clear* and *warm*. This was Monday. About Friday the weather became *cold* and *clear*. The disease then reached its maximum. By the following Tuesday fifteen had died.

None of the adjoining neighbors had the disease, although the dwelling-house of one is closer to my quarter than my own; and it is supposed that some of the negroes on one or the other of the adjoining places stole the clothes left by my negroes when removed below town.

The cholera was never on this place before. It raged on the adjoining plantation below me in 1832 or '33. During its ravages here, there was a manifest increase of diarrhea on this plantation. It is not known where or how the Irishman took the disease.

Two miles below Mr. Osborne's plantation is that of Mr. Billou.

Mr. Billou's Statement.—Hector, an elderly negro man, who was in the habit of visiting town daily, was attacked on the 16th of June, in returning from town, and found in collapse upon the banks of the bayou. He was carried home, died in five hours, and was buried the same evening. Four negroes waited on him; two others assisted in putting him in the coffin; none of these were the first attacked. All the negroes attended his funeral, but the coffin was nailed up before they came into its vicinity. It is supposed that there was no cholera in town at this time.

The second attack occurred on Tuesday, eight days after

Hector's death. A girl had been sick of a fever, went out well on Monday, ate a roasting-ear, and was found the next morning before day-break in collapse; she threw up the corn.

On Wednesday, (nine days afterwards,) two cases occurred. One died. A woman was attacked Thursday night and died Friday. She had nursed the sick. On Saturday, two were attacked and died the same day. One of these had waited on the sick.

There were forty-six negroes; ten were attacked, seven died. The three that recovered were mulattos; no mulatto died; the disease was of the malignant form. Hector was supposed to have had a premonitory diarrhea.

The average of time from attack to collapse was from half an hour to two hours. The number of passages in this interval from one to three. Cartwright's práctice was first tried; then a variety of remedies. None of the white family had even diarrhea.

There are four China trees opposite as many of the negro cabins. Each of the three opposite those cabins in which the cholera mainly raged, began to fade at the time, and have subsequently died. The fourth one is still living. There was only one case of cholera in the house the front of which it shades.

One plantation separates Mr. Billou's from Donaldson's and Nelson's.

Mr. Donaldson's Statement.—Mr. Donaldson does not know how the cholera reached his plantation. He had just built new quarters, cleaned up the premises, white-washed the cabins and used every customary precaution. Obstinate diarrhea, influenza and croup had been epidemic among the negroes some weeks before and up to the first case of cholera.

This case occurred on the 14th of June. The patient died on the 15th. He had premonitory diarrhea; had not been off the place.

The weather had been dry and clear. It changed the day

or the day after the burial of this man, and continued rainy the balance of the time.

Within three or four days after his death, about fifteen premonitory attacks occurred. Cases then took place for four weeks. The last three cases died; no completely collapsed case recovered; one who entered the limits of collapse, got well; thirteen died; there were about 190 or 200 on the place; very few escaped a slight attack; the most of them took some medicine; the overseer and Mr. D's. lady and children were attacked. Major Nelson and Mr. D., who had visited various places where the cholera was raging, escaped entirely.

The negroes were "scattered," or "thinned," as soon as the second deaths occurred.

The very night on which they were scattered, about thirty were attacked, including some of those removed and some of those who remained; one who lived at the sugar-house was attacked, also the hostler who lives in an isolated house, and two who reside in the yard of the dwelling-house. The negroes were moved back to their usual quarters in the course of two days. Mr. Donaldson hesitated in answering the fourth question. He thinks, however, that the disease was of the malignant form; the cases being prevented from manifesting malignancy by treatment in advance of diarrhea or sick stomach; even for abdominal uneasiness.

Jeff, a likely man about 25 or 26 years of age, was sent for and questioned, because the negroes said he did not appear to be well; he said he felt a little weak, and was directed to go home; he did so, and did not purge at all; vomited half a gill of mucus, and was found fifteen or twenty minutes afterwards in collapse; injections of lobelia, pepper tea, and No. 6, were given him; he vomited but little more; the injections brought off one natural stool; he then had one or two small ones, probably the injections; he was rubbed with sulphur, mustard, salt, &c. Death took place within five or six hours.

Out of twelve or fifteen who took medicine at one time without having any looseness of the bowels, simply for abdominal uneasiness, several began to purge in from one to five or six hours after, and became dangerously ill; two of these died in a few days from relapse, after salivation.

Cartwright's old prescription, combined with tannin, was given to all the indisposed.

The mules and horses looked very badly during the visit of the epidemic; although well fed, they grew lean and lost their hair; the poultry also died during this period.

A few cases of cholera, and deaths therefrom, occurred on this plantation in 1832 or '33.

One plantation lies between Mr. Bibb's, and Donaldson's and Nelson's; the stench from Mr. B's. grave yard during the prevalence of the epidemic there, was disagreeably perceptible to the family residing on this plantation; yet no case occurred here until the last of July or the 1st of August; then one of the negroes had an attack, of which he recovered. Mr. Bibb's plantation is opposite the lower part of Thibodaux.

Mr. Bibb's Statement.—The cholera appeared here about the 1st of May; some of the negroes were in the habit of visiting Thibodaux, but these were not the first attacked; a woman and an infant, neither of whom had been off the place, were the first cases.

The cholera lasted three weeks; the weather was pleasant the greater part of this period, but several times became a little cool and rainy; at these times the cases were much more numerous and fatal; at one such period there were twenty-seven corpses in the houses at once; these victims had died within two days.

The first cases were of the malignant form; the premonitory period being only of three or four hours duration; out of about thirty collapsed cases of this form, only two recovered; out of the last fifty-six collapsed cases, seven recovered.

There were 330 on the place; nearly 300 were treated for cholera; 69 died; 9 collapsed cases recovered.

Neither of my adjoining neighbors were attacked by the epidemic; it is said to have prevailed here in 1832 or '33.

Treatment; mustard and salt emetic, opium and blue mass, or calomel, in small doses, combined at first with pepper, subsequently with ginger; the usual internal and external stimulants were also used.

A mile or two below Mr. Bibb, resides Mr. Paul Thibodaux, the head of a small Creole family.

Dr. Rouannet informs me that Mr. Thibodaux had cholerine and recovered. Three of his children, aged two, five and six, were attacked and died. The form of cholera is not known, but supposed to be mild. The Dr. found them in collapse. After the second child died, he had the family removed to a house a little way off. The third and last case then occurred. After this they moved back to the dwelling house, which in the meantime had been cleansed and ventilated. None of Mr. Thibodaux's adjoining neighbors were attacked.

Two or three miles below Mr. Thibodaux, is the plantation of Mr. Rose. He lost five negroes, and had twelve or thirteen cases.

Mr. Webb, his adjoining neighbor, lost one negro about the same time.

About three miles below these plantations, is that of Mr. Williams.

Statement of Mr. Dollar, the overseer of Mr. M. Williams.—The cholera appeared here the last of September or the 1st of October. It was of the malignant form. Six cases died within twenty-four hours after its appearance; two in the next twenty-four hours, and one in the next three days. About twenty were attacked and nine died. The number of negroes was seventy-five. The meal was discovered to be slightly musty. It must have been so several weeks before the appearance of the pestilence. The first one attacked, and four of the first six that died, had arrived only seven days before. They were from Mississippi.

An adjoining neighbor had two cases (Dr. Rouannet says four) before it attacked this place. The two cases alluded to died. Both were children. A neighbor adjoining Champayne, had one case, a negro child, which died.

Six families live within about three arpents in front of William's sugar house and quarters. Three or or four of those had no cholera. The two mentioned lived more directly in front of Williams' quarters than any of the others.

Dr. Rouannet says the Champayne family moved as soon as

the two fatal cases occurred; had their premises cleansed, and their house white-washed before returning.

A negro woman of Mr. William's performed this work. She escaped entirely.

Two or three miles below M. Williams, the Wagenspachs, four Creole families, reside on a plantation, adjoining R. R. Barrow's. They dwell in four different houses. These houses are in a row, and separated only by open fences. The two outside are not more than three or four hundred yards apart.

The cholera on the 6th of September broke out in the two middle houses. In these there were twelve cases and seven deaths within a week. Some of the victims were white and some black. The form of cholera was mild. The wind was from N. E. The weather a little cold. The families residing in the two exterior houses escaped entirely; consequently there were no cases in the house adjoining Barrow's.

Æther and opium, laudanum and starch injections, and external applications were used. The diarrhea was attributed to eating sweet potatoes.

A negro preacher, belonging to a gentleman a mile or two, distant, visited the sick, went home and died of cholera. No others were attacked.

One of R. R. Barrow's men visited the first patient who died at the Wagenspachs' after he was dead, and sat up with the corpse. He returned home and in a few days was seized with cholera. About ten days after his death it attacked Mr. Barrow's negroes generally.

Statement of R. R. Barrow's overseer.—The cholera was introduced by a negro who visited the sick on an adjoining plantation. The quarters are fifteen arpents distant.

The disease appeared here some time in September. The weather was dry and sultry, followed immediately by a week's rain.

The disease lasted about two weeks. "I do not know what was its form."

There were about thirty-six cases; sixteen died; four collapsed cases recovered. Calomel, opium, cayenne pepper

and tannin were given internally, and external stimulants were applied.

The cholera prevailed on this place in 1832 or '33, and was very fatal.

One family resides between Mr. Barrow and Mr. Gayle. Mr. Gayle had three cases of the mild form of cholera in his family. 1st case in February, 2d in April, 3d in October. All recovered.

Adjoining Mr. Gayle, and not more than fifty yards from his, is the residence of M. Gervois. We are indebted to Mr. Gayle for the following statement.

The first case at M. Gervois, occurred on the 15th of July The second case two days afterwards. There were fifteen cases and seven deaths, within a week. The weather was warm and rainy.

If not malignant, it was the highest grade of the mild form. It began with obstinate vomiting and purging, and collapse supervened in a few hours.

Five died from imprudence, after being considered decidedly convalescent; one from excessive drinking; one from eating grapes; three from eating "hard boiled" rice and drinking freely of red oak bark tea. The first case was seen by Dr. Gazzo. The second, a child five years old, was not seen by a physician, and took no medicine; four out of the last nine collapsed cases recovered.

Treatment in all the cases except the two mentioned, consisted of very large doses of opium, sugar of lead and calomel. No stimulants except external ones were resorted to.

Another Mr. Wagenspach lives a few miles below Mr. Gervois. Some time in June, a negro man died at his residence, of cholera; eight days after this, a young lady staying in the family, was attacked and died. These were the only cases.

J. Aubert's plantation is just below and adjoins this place Mr. Borras, the superintendent of Mr. Aubert's plantation, gave me the preceding and the following statement.

The cholera which raged at J. Aubert's, was of the mild form There were twenty-eight cases and seven deaths; four men, two women, and one child.

1st case occurred 1st of July.
2 cases 7th "
1 case 8th "
1 do 16th "
1 do 18th "

This was the order of the fatal cases. The last case occurred on the 20th of the same month.

Two collapsed cases recovered. The treatment was mainly calomel in large doses, (from 25 to 40 grains,) and laudanum in teaspoonful doses.

There were eighty-eight on the place. The cholera never prevailed here before.

This statement completes our history of cholera so far as its ravages along the banks of the bayou in this immediate vicinity are concerned.

The following facts reported, by my friend, Dr. McLeod, will render that history complete as far down as Lockport, a village twenty miles below, which is the terminus of the sugar plantations, and the thick Creole settlements. The first case occurred at Lockport the 31st of December, 1848, and died the next day. This man had visited a negro man on the steamboat Mary Foley, who had cholera. He had diarrhea at the time, and was advised not to neglect it. There has been no malignant cholera in this neighborhood. It did not attack adjoining places.

But one case occurred off from the bayou. This was a woman, who visited some persons on the bayou sick of the disease. She returned home, was attacked, and died.

The Doctor had one indisputable case on the plantation of Mrs. Mathews. He concealed the fact that it was the cholera, from the negroes, had the victim buried soon after his death, and his cabin vacated, cleansed and ventilated. There was no other case.

Dr. M'Leod, whose experience entitles his opinion to some weight, believes very large doses of calomel, combined with a sufficiency of opiates and astringents, to be the best plan of treatment.

Bayou Terrebonne rises in Judge Guion's field, and winds its way in a southerly direction, widening as it advances,

through a rich region of sugar lands. It is settled up somewhat like the Lafourche. The chief difference is, that sugar is grown on both sides, while the residences are, for the most part, only on one.

A Creole settlement lies between the extremity of Judge Guion's field and Col. V. P. Winder's.

The cholera did not attack this settlement. In April, it appeared among Col. Winder's negroes, and destroyed several.

Between Col. Winder and Madame Thibodaux there are two plantations. The cholera *skipped* these, and, in the latter part of May attacked Madame Thibodaux's negroes.

There are about 100 negroes on her place. The most of them were attacked; 22 died. Beyond this place it has not yet extended.

Behind the swamps that bound the sugar lands of Lafourche, other bayous arise on each side, which run through high and fertile land. The banks of some of these bayous are crowded with Creole settlers, and here and there a sugar plantation appears.

The cholera has attacked some of these settlements, but, in doing so, it has exhibited the same *skipping* propensity—the same partiality or seeming sense of selection.

Dr. Scudday, in connection with two other gentlemen, owns a plantation about fifteen miles, by the way of the road, north of Thibodaux. It is located on one of the bayous alluded to. The road from Donaldson's and Nelson's to this place passes by or through two large plantations and a great number of Creole settlements.

The epidemic skipped all these. The following facts are reported by Mr. Smith, one of Dr. Scudday's partners:—

Mr. Smith's Statement.—The cholera appeared here the 16th of July. How it reached this place is enveloped in complete mystery. The weather was warm and rainy. The disease lasted two weeks. Three cases had no premonitory symptoms; the others were of the mild form. At least 50 were attacked; 13 died. There were about 70 on the place. Opium, calomel, camphor, Dover's powder, brandy, pepper, &c., were chiefly used. No

adjoining neighbor was attacked. It prevailed in a Dutch settlement three or four miles distant. This plantation was not opened in 1833.

The cholera of the upper parishes, Assumption and Ascension, was, we have been informed, characterised by the same disposition to skip contiguous places, to rage *unmixed* in one or the other form; to linger and reappear, if mild; to run a rapid and complete career, if malignant; and, by the same excess of fatality, in collapse caused by the latter form.

Thibodaux, Nov. 1st, 1849.

Since writing the preceding communication the cholera has again appeared in Thibodaux. Three sets of negroes, the whole numbering about 75, were brought there the last of October or 1st of November, by the negro traders. About the 1st of December, cholera began amongst and has subsequently attacked the most of them. Two collapsed without known warning. One of the owners, and nine of the slaves have died.

Within the last week two cases have occurred among residents. One left town, and died in the country. His death is said to have resulted from excessive imprudence and neglect. The other, a lady, was attacked at night, and, having no one to send for a physician, took nothing. When the physician arrived, the next day, her case was hopeless.

These are the only cases reported on credible authority, which have occurred among residents of Thibodaux or Lafourche Interior, within the last two months.

Does the cholera poison still pervade our atmosphere?

Is the resident population acclimated to this poison?

REPORTS FROM LOUISIANA.

ARTICLE XI. — Reports on the origin and sanitary condition of the orphan asylums of New Orleans and Lafayette. By J. Rhodes, M. D., O. Carey, M. D., and W. P. Sunderland, M. D.

We are indebted to the kindness of the attending physicians, for the following accounts of the establishment and sanitary condition of these interesting institutions. We addressed the following interrogatories to each of them, and received their respective reports in reply.

New Orleans, Sept. 23d, 1849.

My Dear Sir,

Will you be so kind as to furnish me some account of the establishment and sanitary condition of the Orphan Asylum, upon which you attend?

1. When and by whom was it founded, and upon what principles?

2. The number and age of its inmates?

3. What is the quality of their food, and their habits in respect to eating, sleeping and exercise?

4. What diseases are most common amongst them?

5. Do they suffer much from yellow fever?

6. To what extent did they suffer from the late epidemic *cholera?*

Any other matters of interest or importance will be thankfully received, and your compliance will greatly oblige

Your friend and obedient servant,

E. D. FENNER.

I.—Report on the Poydras Female Orphan Asylum. By J. Rhodes, M. D., the Attending Physician.

The Poydras Female Orphan Asylum was established in the year 1816, by a number of Protestant ladies, with the aid of subscriptions, and was dependant entirely for its support on its benevolent subscribers, one among whom was Poydras, who annually subscribed the handsome sum of one thousand dollars, and made a donation of the tenement now standing at the corner of the present site, for the express purposes of an asylum.

At the death of Mr. Poydras the asylum became considerably enriched by the legacy of valuable real estate bequeathed by him; a portion of which is the square of ground on which the asylum now stands, bounded by Poydras, St. Charles, St. Joseph, and Carondelet streets. From the increased means thus placed in the hands of the benevolent ladies who first founded the institution, they were enabled to erect other buildings more commodious, and so to extend its usefulness.

The names of Henderson and Milne deserve to be recorded, as having followed the generous example of Poydras, both having left large legacies to the Asylum, and also the name of Girod, who, however, left only a small legacy.

From the rich bequests that were thus made to the Asylum, there was no further necessity for calling for aid on the original subscribers; the revenue accruing from the real estate being quite adequate to carry out the laudable object of charity of its original founders.

The Asylum, as originally established and still continues, is under the entire control of lady managers, who annually elect from among themselves a Superior Directress, who acts as President. The lady managers meet weekly for the general management of its affairs, and for the reception of children, and one or more of the ladies visit the Asylum daily; in their absence, the duty of carrying out the regulations devolves on a matron, who is regularly appointed to take charge of the whole establishment. Competent teachers are provided for the education of those children who are of sufficient age, and interesting examples of intellectual development are witnessed at their annual examinations.

The children of Catholics and Protestants are admitted without any restrictions, and both attend their respective places of worship, accompanied by proper monitors.

The number of children that the Asylum is capable of accommodating is one hundred and fifty. Orphans at all ages, up to ten years, are admitted, receiving the benefits of good instruction till fit and proper situations are obtained for their future career.

Many children of parents in a destitute condition are also admitted, and enjoy all its privileges.

The food is of a character appropriate to the respective ages of the children, the younger ones having chiefly farinacious food with occasional soup and meat; while the older ones have for their breakfast tea or coffee with bread and butter; and for dinner, soup, meat with proper vegetables, and farinacious puddings, varying the quality on different days of the week. The supper meal generally consists of tea, with bread and butter; and for the infants, milk and water, with butter and bread.

The dormitories are large, airy and spacious, so divided that the children are not over crowded, two children being generally allotted to each bed, and the number of beds in a room about twenty.

As regards exercise, the children, in the intermission of school hours, are allowed freely to ramble about and amuse themselves, free scope for exercise being afforded by the large lot of ground by which the asylum is surrounded.

The diseases mostly prevalent in the asylum for the last few years, have been opthalmia and diseases incidental to children, such as measles, scarlet fever, diarrhea, &c.

Not having had the medical care of the establishment but a short time, I regret I cannot give you a statistical detail of their variety; my visits to the asylum previous to my appointment being only occasional, during the temporary absence of my respected predecessor; but from what I have observed and the information obtained, I should place purulent opthalmia among the most inveterate of the maladies that afflict the children of this asylum. Some few years back, it committed frightful ravages. The disease still occasionally shows itself;

but it does not take on so malignant a form, and readily gives way to medical treatment.

Scarlet fever was very prevalent in the spring of 1847, and continued in the building nearly three months, few of the children escaping an attack; but the type was generally of a mild and non-inflammatory character. As is usual in such cases, the disease declared itself in a variety of forms, the papular eruption being most common, attended with slight fever and sore throat. Some escaped without any eruption; others took the disease in a more severe and malignant form—and few of the latter only proving rebellious to medical treatment. The sequelæ of scarlet fever were very general, such as debility, free desquamation and occasional dropsy, but gave no trouble.

On the decline of the scarlet fever, several cases of measles occurred; but as the catarrhal and febrile symptoms were of so mild a character, they require no specific observation.

The above diseases may be said to have been the only epidemic ones that have declared themselves in the asylum for the last few years, up to the invasion of the cholera of this year.

A case of yellow fever occurring among the children, I have never seen or heard of; and if ever it has existed there, I imagine it must have assumed so ephemeral a form as to have escaped observation.

In making the following observations on cholera as it occurred in the Assylum, I must premise that they are necessarily somewhat brief and imperfect, not having at that period taken any notes of the cases, from the hurry of professional duties; and many months having elapsed before I received your request, some apology must be made, as I write entirely from memory.

The invasion of *cholera Asiatica* (as it is improperly called) at the Poydras Assylum, occurred at the end of February of this year. Up to that time not a case had shown itself in the building, although for some two months, it had been raging in the immediate neighborhood. Every sanatory measure had been put in force, and great attention paid to proper clothing, food, &c., and instructions given to have the children watched as much as possible, so that any case of diarrhea happening, it might be immediately attended to. This latter injunction was

somewhat imperfectly performed, on account of the number of children, and the difficulty of watching at all moments children so young, many of them being barely able to make themselves understood; it was therefore necessarily attended with some uncertainty; but so far as could be ascertained, the children up to this time were particularly exempt from any symptoms of derangement of the bowels, and appeared to enjoy more than usual good health; so much so that I began to congratulate myself the Assylum might probably escape a visitation of the cholera which had already committed such havoc in our city. On February the 20th I was sent for in great haste, as a child had been suddenly seized with an urgent diarrhea, and on being brought up to the Infirmary, fell prostrate on the floor and remained for some little time in a state of syncope, soon followed by symptoms of collapse with vomiting and purging of the characteristic evacuations of cholera. It was in this latter state that I found my little patient. It did not take me long to diagnose the malady; it was clear cholera had gained an admittance and impressed me with fearful forebodings for the future.

In endeavoring to trace out the origin of this case, I could not obtain any information but what induced me to suppose the case to have had its origin within the establishment. It is somewhat difficult to arrive at a satisfactory conclusion where there is a constant ingress and egress, as there necessarily must be in an Asylum; but so far as could be ascertained, not any children had at that time been admitted whose parents had died of cholera; nor had any been admitted, but what were in a healthy condition. It appeared on examining this child, that for some two or three days it had had a looseness of the bowels; but being in other respects well, had made no complaint until she was fairly stricken with the fatal malady. On the same day or the day following, two or three cases more occurred, and for the space of three weeks, with but slight intermission, two or three cases were daily occurring, although not of equal malignancy; so that the total number of cases of cholera could not have amounted to less than *fifty* or *sixty*. In order to avoid the ill effects of having so many children exposed in a limited sphere, I considered it my duty to advise the separation of them as far as possible, and thus the Assylum became relieved of about

fifty; the number remaining I believe to have been about one hundred, and few of them escaping without some derangement of the bowels. With but few exceptions, the children who were siezed with the disease, had invariably diarrhea from one to two days standing. The peculiar character of this evacuation could not be ascertained in all cases, but when brought up to the Infirmary, they presented the usual appearances observed in Asiatic cholera—the vomiting and purging of a fluid resembling rice-water, a great tendency to syncope on being placed in the erect position, many falling prostrate on the floor, as if suddenly deprived of life.

The desire of drink was in every case very urgent; the fluid seldom retained, being thrown up almost immediately with great force; still the little sufferers continued their plaintive cry for *water*, *water*, (in the fatal cases,) till the last moment of articulation.

The features became so altered, as the symptoms of collapse came on, and in many cases they came on with astonishing rapidity, that it was almost impossible to recognise the most familiar face, with its sunken eye and livid expression. As the stage of collapse progressed the skin became icy cold, small feeble pulse, cold breath and tongue, the peculiar choleric voice and suppression of urine. In not one instance was any thing like cramps of the extremities observed; children under ten years of age, it appears, being peculiarly exempt. Vomiting and purging continued with but few exceptions to the last moment, the intelligence remaining good till death closed the scene. The children who were fortunate enough to pass satisfactorily through the stage of collapse, many of them had to encounter the no less dangerous consecutive fever, characterized by hot skin, flushed countenance, small quick pulse, cerebral derangement, &c. Others, in place of anything like febrile excitement, went into a state of coma and remained in that condition, some three or four days, rousing up about twice or thrice in the twenty-four hours, begging for water and then relapsing into their former comatose state.

The peculiarity of this latter condition, I at first attributed to opium that might have been administered in the early stage of the disease; (as it somewhat resembled narcotism;) but

when I found the same phenomena in those who had not taken of this drug, my curiosity became excited for a satisfactory elucidation, and I invariably found it a concomitant of imperfect restoration of the urinary secretion, and in all probability depending on the non-elimination of urea from the blood; for as the secretion of urine became more copious so did my little patients arouse from their comatose condition and finally regain their health.

As regards the treatment pursued by me, I cannot speak with much satisfaction of any special plan, except when the disease came early under observation; that is to say, before the symptoms of collapse—they were generally much benefited by the administration of anodyne enemas and the ordinary mistura cretæ comp.; but when the disease had made rapid progress, and the rice-water evacuations, with frequent vomiting, accompanied with great sinking of the vital forces, remedies of any kind seemed to be very ineffectual; yet were I to place more reliance on one remedy than another, it would be on *calomel*, administered very frequently, and in fractional doses of half a grain to one grain, according to the age of the infant, and occasionally also administering small doses of camphor and powdered capsicum, till reaction was established. The adjuvants were stimulating frictions to the spine, &c., mustard cataplasms to the extremities, aromatic drinks, and warm covering, aided by hot bricks.

II. Report on the New Orleans Female Orphan Assylum.

By O. Carey, M. D.

[The historical sketch that follows, was furnished by the superintendent, the memoranda of sickness were given verbally by Dr. Carey.]

The New Orleans Female Orphan Asylum was commenced October 25, 1836, by six Sisters of Charity, without funds, in a house given rent free, by Joseph Kennedy, Esq. The number of orphans having in the lapse of three years increased from six to ninety, the necessity of providing a suitable and permanent abode, was felt by all interested for the well-being of the orphan.

The town lot twenty-three, the site of the present edifice, was

bequeathed by the late Madam Saulet, for a chapel, under the patronage of "St. Teresa," and a Female Orphan Asylum, with the clause that the chapel should be built first. This clause, was, under existing circumstances, changed by the approbation of Mr. Saulet and Madame L. Foucher, and the proviso made, that after the completion of the asylum, "the chapel should be erected at the expiration of six years." There being no funds for the erection of an asylum, Madame Ponge suggested the idea of holding a fair for that purpose, which was sanctioned by many of the most respectable French and American ladies of New Orleans, and realized, through their zealous exertions, the sum of sixteen thousand dollars. This amount left a standing debt of $2,500 which has since been liquidated, partly by the several grants of the State Legislature, the yearly appropriation of the Second Municipality, contributions of private individuals, &c. Within the last two years the number of orphans has been about two hundred.

It should not be omitted that from the commencement the institution has been gratuitously attended by Drs. Kennedy and Stone, and for the last ten years, by Dr. Owen Carey; also that the principal part of the bread and meat has been liberally furnished by several of the bakers and butchers of the city. The above, with the profits arising from the dairy connected with the establishment, constitute the principal means of support. The dormitories of the Asylum are spacious and airy. The orphans' hour for rising, in summer, is half-past five o'clock; for retiring to rest, 8 o'clock.

Diet.—7 o'clock, breakfast; at which bread, butter and coffee.
12 " dinner; good soup, meat, potatoes, rice, &c.
5 " super; tea, bread, butter, or molasses.

Fruit, in season, as far as the resources of the house admit. Full baths, weekly, during the summer season.

From half-past 8 o'clock in the morning till 12, English class.

From 1 o'clock till 3, French class.

From 2 till 4, plain sewing, tapestry, &c.

Recreations and domestic duties, after each meal. Studies for one hour preceding night prayers.

Dr. Carey can best give an outline of the general state of the children's health, having been the sole attending physician for so many years.

The late cholera.—We are informed by Dr. Carey that as soon as the epidemic broke out he directed the superintendent to withhold from the children all fruits, and to allow no vegetables except Irish and sweet potatoes, and rice. By way of *preventive*, he directed a small quantity of a solution of table salt to be given to the children every morning. An effort was also made to prevent the introduction of any case of cholera from without. It appeared, however, that two children with cholera upon them were introduced, one of them clandestinely; the other was brought, having just lost both parents. These children were both isolated, and kept entirely apart from the others. One of them died, the other recovered. *Not a single case of cholera originated in the establishment during the whole year.* This institution is situated in the fork of Camp and Prytania Streets, in a densely populated part of the city, and freely exposed to the open air. The cholera prevailed all around it.

After the epidemic was over, in the spring, there prevailed among these children an extraordinary amount of *bilious pneumonia.* At this time we visited the institution in company with Dr. Carey. We found seven or eight children sick, presenting well marked symptoms of pneumonia, accompanied by excessive vomiting of bile. This bilious vomiting occurred in all the cases, and continued for many days. Of fifteen or twenty cases, there occurred but one death, a degree of success which was very creditable to the attending physician.

We were further informed by Dr. Carey that this institution had never enjoyed a like exemption from epidemics of *yellow fever.* On the contrary, cases have occurred both amongst the children and Sisters of Charity during all epidemics of yellow fever. Measles and scarletina have likewise prevailed here from time to time.

As before stated, this Orphan Asylum is situated in an open and airy location, and is managed with all the order, neatness and decorum which characterize the pious and benevolent *Sisters of Charity.*

III. Report on the Male Orphan Asylum of Lafayette. By W. P. Sunderland, M. D., the Attending Physician.

This Asylum was founded in 1824 by a number of gentlemen, who received a charter in the same year from the Legis-

lature, under the name and style of "the Society for the Relief of Destitute Orphan Boys," for the purpose of receiving, educating, maintaining, and properly placing as apprentices to suitable trades, arts and professions, indigent male orphans.

From the number of poor immigrants arriving at this port after long passages, cooped up in ships, living on scanty and unwholesome food, without the means and often without the disposition to keep themselves cleanly, arriving too in a strange climate, without friends or money, many of whom die soon after landing, leaving their children to be received by an institution of this kind, we may form some idea of the class of children admitted into this asylum. They are the children of poor, diseased and dissolute parents; many of them are subjects more fit for a hospital than an asylum; many are admitted in a half-starved and extremely filthy condition; ten per cent. of those admitted are infants of a few months old; about 20 per cent. from 1 to 3 years; 30 per cent. from 3 to 7 years of age; and 40 per cent. above that age.

When the children are received, they are washed from head to foot in strong soap-suds and warm water, clothed in clean clothes, and placed under surveillance for a few days, to see if they have any contagious disease; when it is ascertained that they are healthy, they are allowed to mix with the rest of the inmates. The boys rise early, bathe themselves in cold water, breakfast at half-past seven in summer, and half-past eight in winter; and are kept in the school-room from nine until twelve, when they dine; after dinner they are allowed to play until two, when they are again called into the school, and kept until half-past four, when they are dismissed until six, at which hour supper is served; at eight they wash their feet and are sent to bed.

Breakfast consists of coffee, rice, hominy, bread and molasses; dinner, (varying through the week,) of corned and fresh beef, veal, mutton, ham, cod-fish, pork and beans, stewed meats, hashes, potatoes, turnips, carrots, onions, cabbage, lettuce, and green and dried fruits in their season; supper of tea-cakes and mush and milk. The food is plainly cooked, of the best quality, and in ample quantity. There is a large vegetable garden on the premises, and a considerable number of fig-

trees. There are large, well ventilated dormitories, furnished with clean beds and bedding; also a well appointed nursery for the smaller children, and a hospital for the sick. There is an abundance of water on the premises, and the whole establishment is kept in clean and perfect order by the servants, of whom there are about twenty.

There are large play-grounds attached to the asylum, in which the boys amuse themselves with balls, marbles, tops, kites, and boyish sports, which induce them to take exercise in the open air. In addition to this, they make one or two pleasure excursions each week, when the weather is suitable. All the inmates of the asylum wear flannel shirts next the skin during the entire year; in other respects their clothing corresponds to the season.

The following table shows the number admitted, the number taken out by friends, apprenticed by the directors, and absconded; the number that have died over and under seven years of age; and the number remaining in the asylum at the end of each year:

Table of Statistics of the Male Orphan Asylum of Lafayette.

Year.	Admitted.	Taken out by friends, apprenticed by Directors & absconded.	DIED.			Remaining in the Asylum at the end of the year.
			Under 7 years of age.	Over 7 years of age.	Total.	
1824	12	.....	.....	.....	.....	12
1825	36	5	.....	.....	.....	43
1826	16	20	.....	.....	.....	37
1827	12	10	1	1	2	37
1828	19	16	.....	.....	.....	40
1829	24	15	1	1	2	47
1830	36	22	4	3	7	54
1831	26	14	3	.....	3	63
1832	59	29	6	1	7	86
1833	82	49	26	1	27	92
1834	55	39	15	4	19	89
1835	48	33	12	.....	12	93
1836	17	24	4	1	5	86
1837	36	25	1	2	3	94
1838	33	19	2	.....	2	106
1839	36	26	8	1	9	109
1840	28	32	8	2	10	95
1841	51	71	5	1	6	69
1842	19	52	6	1	7	28
1843	10	16	4	1	5	39
1844	20	19	1	1	2	38
1845	12	14	1	2	3	33
1846	26	17	1	.....	1	41
1847	39	9	5	3	8	63
1848	38	29	11	.....	11	61
1849	44	12	7	.....	7	86
Total.	834		132	26	158	

The average time that the boys have remained in the Asylum is two years, one month and twenty-three days. The average number of boys in the Asylum each year is 71.5. The average number of deaths each year 6.32, which is 8 per cent. Of the children under seven years of age 14 per cent. die; while of those over seven only 3 per cent. have died.

If we take into account only those children who were healthy when admitted, the mortality of those under seven years will be about five per cent., while that for those over seven will be about one per cent. per annum.

Having been connected with the Asylum but two years, I am compelled to refer to the books of the institution for statistics, and I find that no register of cases has been kept, and in many instances the cause of death has been omitted; when it has been stated, diseases of the bowels make up seventy per cent. of the mortality. Prior to the appearance of the cholera of 1833–4 dysentry swelled enormously the amount of fatality; I observed the same thing prior to the occurrence of the cholera in the city in 1848. There are five deaths specified from cholera, two in 1833 and three in 1834. There are five deaths reported from yellow fever, viz., one in 1829, one in 1833, one in 1834, and two in 1847. Since my connection with this institution there has been no case of either cholera or yellow fever. The only prophylactic measure I adopted was to reduce somewhat the variety of vegetables. I am disposed to think that the immunity to these diseases enjoyed by the Asylum has been in some measure attributed to cold bathing and the use of flannel shirts next the skin.

Measles, scarletina and whooping cough have at various times visited this institution, but never have been attended with much fatality.

Hoping this letter may be acceptable to you,

I remain your obedient servant,

W. P. SUNDERLAND.

REPORTS FROM LOUISIANA.

ARTICLE XII.—NEW ORLEANS CHARITY HOSPITAL.

[We had prepared a full report on this great institution, giving a historical sketch of its origin and progress, a description of the buildings, and some reflections upon its present condition and management, together with its influence and bearing upon the private hospitals and the medical profession generally in this city; but we find we cannot make room for the article in this volume. We shall therefore reserve it for our next, and at present, only give the following statistics, which will probably be interesting to the reader.]

A Monthly Statement, showing the number of Admissions, Discharges and Deaths, at the New Orleans Charity Hospital, during the year 1849.

1849.	ADMISSIONS.			DISCHARGES.			DEATHS.			Remaining.
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	
January,	851	218	1,069	606	154	760	267	49	316	604
Februaty,	737	189	926	552	117	669	138	28	166	694
March,	1,014	304	1,318	717	227	944	320	32	352	715
April,	806	301	1,107	476	200	676	177	32	209	837
May,	901	333	1,234	716	268	984	240	28	268	800
June,	728	218	946	598	196	794	140	26	166	781
July,	773	261	1,034	669	194	863	67	31	98	866
August,	1,067	320	1,387	943	287	1,230	92	19	111	913
September,	1,438	372	1,810	1,109	312	1,421	211	38	249	1,050
October,	1,495	362	1,857	1,174	330	1,504	319	33	352	1,051
November,	1,224	224	1,448	1,022	205	1,227	244	25	269	596
December,	1,187	240	1,427	895	166	1,061	154	29	183	719
Totals,	12,221	3,342	15,563*	9,478	2,656	12,134	2,369	370	2,739	

* Excluding 71 blacks, which would make the total admissions 15,634.

From this table, it appears that the total admissions were 15,563; total discharges 12,134; and the total deaths 2,739. This shows a mortality of more than 17½ per cent. of the admissions, which is very great; but, it must be recollected, that it occurred during the prevalence of one of the most destructive diseases, *cholera*. In justice to the professional service of the Charity Hospital, we have made out, from the books, the following statistics, showing the number of patients admitted in a *moribund* state, or beyond the reach of remedies.

Statement showing the annual mortality at the Charity Hospital for ten years, (1840 *to* 1850,) *with the number and proportion of patients admitted in a moribund state.*

Years.	Deaths.	Moribund.	Ratio per cent.
1840	619	85	13 +
1841	1,156	256	22 +
1842	761	114	14 +
1843	1,041	89	8 +
1844	713	99	13 +
1845	563	104	18 +
1846	855	130	16 +
1847	2,037	307	15 +
1848	1,897	623	32 +
1840	2,739	859	31 +

It is proper to state, that it is customary at this hospital to consider patients *moribund* who enter in a state of *hopeless collapse*, although some of them may linger several days before death. We have no idea that one-fourth of the collapsed cases of cholera were marked *moribund;* still there were enough so marked to account for the extraordinary ratio presented in the years 1848 and 1849. At all events, the statement is worth presenting, for the purpose of extenuating, in some degree, the great mortality that occurs at the Charity Hospital.

As we cannot make room for the entire list of diseases, we will give the principal ones, or such as exceeded 100 in the number of admissions.

Disease.	Admitted.	Discharged.	Died.
Fever, Intermit.	4,445	3,656	00
Cholera, Asiatic,	1,613	735	1,122
Diarrhea,	1,386	1,065	131
Yellow Fever,	1,062	510	545
Typhus Fever,	970	875	224
Remittent Fever,	883	790	7
Ulcer of Leg,	385	342	4
Rheumatism,	384	384	4
Dysentery,	320	199	117
Syphilis,	302	300	4
Consumption,	268	115	183
Contusions,	232	225	00
Delirium Tremens,	218	170	34
Debility,	208	182	00
Bronchitis,	176	145	4
Wounds,	146	141	2
Abscess, various,	144	148	4
Bilious Fever,	130	94	3
Opthalmia,	102	86	00
Totals,	13,324	10,162	2,388

Native countries of the patients admitted in the year 1849.

UNITED STATES.	Totals.	FOREIGN COUNTRIES.	Totals.
New York	400	Ireland	8678
Pennsylvania	234	Germany	1742
Maine	92	England	734
Louisiana	147	France	685
Massachusets	115	Prussia	414
Virginia	97	Switzerland	263
Kentucky	95	Scotland	258
Ohio	86	Spain	130
Maryland	76	Sweden	98
Tennessee	67	Denmark	94
South Carolina	39	Portugal	84
North Carolina	35	Canada	76
Missouri	30	Sardinia	52
Georgia	29	Mexico	46

UNITED STATES.	Totals.	FOREIGN COUNTRIES.	Totals.
New Jersey - -	27	Norway - - -	42
Rhode Island - -	27	British Provinces in N. A.	41
Connecticut - - -	25	Austria - - -	38
Indiana - - -	24	Holland - - -	33
Alabama - - -	23	Italy - - -	31
New Hampshire -	20	Belgium - - -	23
Vermont - - -	21	West Indies - -	19
Mississippi - -	19	Poland - - -	16
Delaware - - -	15	Russia - - -	12
Illinois - - -	14	East Indies - -	6
District of Columbia -	9	Malta Island - -	5
Florida - - -	5	Sicily - - -	4
Arkansas - - -	3	Chili - - - -	3
Michigan - - -	2	Greece - - -	2
California - - -	2	Africa - - -	1
Texas - - -	2	China - - -	1
Iowa - - - -	1	Venezuela - -	1
Wisconsin - - -	1	Oceana - - -	1
Total, U. S. -	1782	Total—For'n Countries,	13,634
		Unknown Countries, -	142

ADDITION OF TOTALS.

United States, - -	1,782
Foreign Countries, -	13,634
Unknown Countries,	142
Totals, - -	15,558

The reader can but be struck with the extraordinary disparity between the numbers hailing from Foreign Countries and the United States, as well as between those coming from the Northern and Southern States; but more especially the very small number of natives of Louisiana—being only 147.

The following table was published in one of our city newspapers, by Mr. H. Bier, the treasurer of the Hospital.

Statistics of the New-Orleans Charity Hospital for 20 years, (1830 to 1850.)

	COST OF MAINTENANCE.	AMOUNT DISBURSED.	DEBTS DUE.	PASSENGERS ARRIVED.	AMOUNT RECEIVED FROM PASSENGERS.	PATIENTS ADMITTED.	FOREIGNERS.	UNITED STATES.	UNKNOWN.	LOUISIANA.	STATE APPROPRIATIONS.
First Jan'y 1830 to 31st Dec. 1841						54,790	37,543	16,247		512	
Do. do. 1842	$34,651 96	$24,031 19	$62,310 50	30,832	$5,117 31	4,404	3,277	954		34	
Do. do. 1843	34,746 33	29,970 71	50,613 98	24,930	14,819 49	5,018	3,937	1,076		59	
Do. do. 1844	39,231 04	51,311 15	40,952 63	19,788	16,668 79	6,128	4,530	1,316	282	113	$15,000
Do. do. 1845	39,310 43	63,389 00	19,478 91	29,979	23,786 25	6,136	4,704	1,350	82	119	15,000
Do. do. 1846	43,088 39	53,924 24	13,474 37	34,549	30,146 94	8,044	6,151	1,773	121	145	10,000
Do. do. 1847	56,291 08	70,318 52	4,627 62	41,052	40,402 53	11,890	10,171	1,562	157	53	20,000
Do. do. 1848	*68,048 54	85,176 90	5,120 81	40,992	41,817 41	11,954	10,280	1,579	86	111	10,000
Do. do. 1849	66,351 32	92,993 43	26,634 04	43,398	53,412 46	15,558	13,634	1,782	142	147	10,000
	$381,719 09	$471,115 14		265,520	$226,170 18	123,917	94,227	27,639	870	1293	$80,000

* Of this amount, $11,251 were paid to the Franklin Infirmary for patients removed to said Institution, with Typhoid or Ship Fever.

Main building 33 wards—536 bedsteads. New wing, or female department, 4 wards and 8 private rooms—150 bedsteads. Texas—35 bedsteads. New cells—32 bedsteads.

Under the present management of the Charity Hospital, probably one half the patients admitted are not proper objects of charity, and ought to be excluded. As the licensed physicians of the city perform its immense service *gratuitously* this institution should by all means be confined to its legitimate object—*the relief of the poor.*

REPORTS FROM LOUISIANA.

ARTICLE XIII.—LOUISIANA STATE MEDICAL SOCIETY.

It affords us much pleasure to announce the organization of a State Medical Society in Louisiana. By agreement between the Attakapas Medical Society and the Physico-Medical Society of New Orleans, the licensed physicians of the State were invited to meet in Convention, at New Orleans, on the 20th of March, 1849, for the purpose of organizing a State Medical Society. When the day arrived it was found that on account of the shortness of the notice the number in attendance was too small to accomplish satisfactorily the object desired. This convention was organized by the appointment of Dr. James Jones, President, and Dr. S. W. Dalton, Secretary. After adopting measures to have the physicians of the State duly notified, the convention adjourned, to meet again at the same place on the 3rd of December following.

On the day appointed, the physicians of the city and a small number from the country, assembled at the Medical College and proceeded to the business of adopting a constitution and electing permanent officers. The constitution is very brief, but sufficiently explicit to define the objects of the association, and the duties of its officers and members. The officers of the Society are a President, two Vice Presidents, a Recording and a Corresponding Secretary, and a Treasurer. These officers constitute a Board of Administration, empowered to attend to all necessary business during the intervals of the regular meetings.

The Society is to consist of all the physicians present at its adoption, together with such other licensed physicians and apothecaries of the State, as may be afterward elected. The following officers were elected for the ensuing year :—President, Josiah Hale, M. D.; Vice Presidents, E. H. Barton, M.D., and J. C. Simonds, M. D.; Recording Secretary, F. W. Mather, M. D.; Corresponding Secretary, E. D. Fenner, M. D.; Treasurer, W. Hare, M. D.

Eight standing committees were appointed, whose duty it is to prepare annual reports. The following are the committees and the respective chairmen for the year :

1. On Practical Medicine—Dr. James Jones.
2. On Diseases peculiar to Negroes—Dr. S. A. Cartwright.
3. On the indigenous Botany of the State, and Materia Medica generally—Dr. J. L. Riddell.
4. General and Special Hygiene of the State, Vital Statistics, and Meteorology—Dr. E. H. Barton.
5. On Medical Education and the License Law—Dr. W. P. Hort.
6. The sale of Drugs and quack Medicines, and the Adulteration of Medicines—Dr. G. A. Nott.
7. On Physiology and Pathology—Dr. Bennet Dowler.
8. On Midwifery and Diseases of Children—Dr. A. H. Cenas.

After finishing the business of the occasion, the society adjourned till the next annual meeting, on the 3d of Dec., 1850.

Here is a beautiful lot of work for the physicians of Louisiana, and we trust it will be faithfully performed. The subjects of the committees are of great importance and the chairmen selected, all men of ability.

We now have State Medical Societies organized in seven out of the ten Southern States included in our periscope, viz. : North and South Carolina, Georgia, Alabama, Tennessee, Mississippi and Louisiana; and we expect soon to see a laudable and spirited emulation displayed among them. We shall report what they do from year to year, whether it be little or much. We trust that *State pride*, if no other motive, will stimulate the members of these societies to a vigorous prosecution of the objects before them.

The Physico-Medical Society of New Orleans held numerous meetings during the year, but the time was chiefly occupied in verbal reports of cases and conversations on the prevailing diseases. But few papers were read, and therefore we could

find nothing to publish. We sincerely hope we shall be able to give a better account of the transactions of this respectable society in our next volume.

REPORTS FROM ALABAMA.

ARTICLE I.—Report on the topography, climate and diseases of Madison county, Ala.—By J. Y. Bassett, M. D., of Huntsville.

[This report was accompanied by a beautiful map of Madison County, delineated by the author himself, who certainly must possess considerable talent for drawing. We deeply regret not being able to publish it at this time, on account of the heavy expense. The map was accompanied by a great amount of curious and interesting statistics, a part of which we must take the liberty to exclude, as not having any immediate relation to medicine. We shall arrange the first part of his matter somewhat different from the way in which it was received, and then let the author proceed with his subject in his own way.]—Ed.

Huntsville is situated about the middle of Madison County, Ala., lat. 34° 45′ N., long. 9° 45′ W., and contains, within the limits of one square mile, about twenty-six hundred inhabitants, of whom a fair proportion are negroes and children.

The county contains 530,000 square acres, of which there are

In ponds, marshes and lands injured by back water, - -	25,000 acres.	
In mountains and rivers, - -	50,000 "	
In cultivation, - - - -	92,000	—167,000
Remaining in forest, - -		363,000
		30,000

Mineral Character.—Limestone in the vallies; in the mountains, red sand-stone, coal, and some iron. Water generally cool and pleasant, weak limestone; temperature, from 60° to 65°.

The Tennessee River runs along the entire Southern border of the county; Flynt River and a number of smaller streams intersect it in various parts. There are some considerable mountain elevations in the county, the greatest of which is *Monte Sano*, near Huntsville.

Height of Monte Sano above Huntsville,	1,090 ft.
" " Huntsville, above Tenn. river, at Ditto's,	86 "
" " Tenn. river, above the sea at Mobile,	675 "
" " Monte Sano above tide water at Mobile,	1,851 "

According to the Census of 1840, the number of inhabitants in Madison county was 25,706.

Consisting of Whites,	12,297
Negro slaves,	14,265
Do. free,	144

There are thirty physicians in the county, who do an aggregate of about thirty thousand dollars of good practice annually; to which may be added ten to twenty per cent. for *charity*.

There are six irregular or nondescript practitioners, who claim an aggregate practice of six thousand dollars, annually; but there is no possibility of approximating truth in this direction.

Of the thirty physicians in the county, six reside in Huntsville, and do about twelve thousand dollars worth of good practice. We have also a German Root-Doctor, a Homœopathist, a Steam Doctor and several negro Faith-Doctors. I have no means of ascertaining the amount of their practice, though it is certain that the last who comes generally does a respectable amount for a longer or shorter time, which depends upon his individual tact and church-membership.

There is about ten thousand dollars worth of medicines sold annually in the county, (including about 80 lbs. of calomel and 1,000 ounces of quinine*) of which, about $5,000 is quackery.

I have no means of ascertaining the number of deaths, births and marriages.

Seasons.

Winter.—We have a little snow every winter, and occasionally it lays from a few hours to a few days; ice sufficient for

* Our druggists sell 100 lbs. of calomel and 1400 oz. of quinine annually.

summer consumption, from half an inch to an inch and a half in thickness, but owing to the bad construction of our ice-houses, it generally melts by the latter part of August. Within the last twenty years, china trees have been twice killed by frost.

Spring.—This season is generally wet—frosts late enough to injure both cotton and corn. In the last spring the entire crop of wheat was destroyed by a frost or *freeze* in the latter part of April.

Summer.—Generally very hot, though not sultry. In the direct rays of the sun, I believe the thermometer would rise to 160° after midday, and fall after midnight, sometimes, to 60°, making a variation of 100 degrees in twenty-four hours. It rained every day during the last July, averaging, it is supposed, half an inch daily. August generally wet and hot.

Fall.—The latter part clear, cool, dry and the most delightful season of our year.

Historical Sketch.

There were white men living in Madison County previous to the beginning of the present century. In 1809, the first land sales took place at Nashville, and a portion of these temporary *Squatters* became permanent *Settlers.* The most of those who did not procure homes at that time, belonged to a class, who from taste or compulsion, had separated themselves from the whites, to live on the trail of the Indians; and who, like tigers, and Judases, were not without their use in the mysterious economy of nature. They surpassed the natives in physical force and in genius, and equalled them in ferocity. They had the piratical appetite for gain natural to the English race, which they had cultivated among the whites, and they readily acquired the Indian taste for blood.

Thus, without any particular standard of morals of their own, and having fallen out with that which restrained their christian brethren, they found their interest in adopting the ancient one of Moses and of the Savages among whom they resided—"An eye for an eye," and "blood for blood."

These men, like the fabulous Behemouth that lay in the reedy fens of the early world, drinking up the abundant waters and eating down the luxuriant forests, to make way for civilization, have left little more than a vague tradition of their existence

and exploits, the latter of which has been so embellished that the former already begins to be doubted.

Such a race leave but short records of their diseases—where bloodshed is always epidemic and every man his own surgeon, the few that recover feel grateful to none, and hang no "votive tablets" on the natural columns of their forests—and when a missionary or a novelist is the only historian, it would puzzle Hippocrates himself to collate the cases; but, as most things, as well as lions, track the earth in some manner as they pass over it, these early squatters have also made their mark.

Case.—While digging a cellar, a few years back, on the public square, the workmen opened a cavern that communicated with the spring; they discovered a number of bones, among them lay at least one human skeleton with a broken skull, and a broken bottle, from which the ardent and fiery spirits had alike escaped. The skull was an Indian's and cleft with a hatchet or heavy knife from over the left eye to the crown—lesser marks of this weapon than the fatal one indicate resistance, and his having been hidden in a cave proclaims that a white man slew him; Indians do not hide their dead.

After the land-sales, a better class of men, owners and cultivators of the soil, settled in and about Huntsville, and physicians located amongst them. These were principally young Virginians of good families, who had never offered for graduation, or who had been rejected by the Philadelphia and Baltimore Schools, (for there was a time when our Medical Schools did reject some,) and whose out-fit in life generally consisted of a pretty fair education, a genteel suit of clothes, a good horse and a mulatto servant; and whose object in life, to judge from their habitudes, was like that of our young preachers, to marry, and quit a profession they never loved, because they never knew. Though few medical facts of value could be expected *from* these gentlemen, their neighbours have preserved in the traditionary archives of the village some interesting notes *of* their practice.

Case.—A man was knocked down on an election day, and lay senseless. Dr. H—— forced his way through the crowd, and seized the wrist of the patient. (The rad. art. dividing high up, dodged the doctor's thumb by passing over the back of the hand.) Having no history of the case he pronounced it "Apoplexy." "Is he dangerous?" said the Sheriff, "I pronounce him a dead

man," said the Doctor. "Did you say that in reference to me?" asked the patient, raising and reaching for his mashed hat.

The diseases of this period were deadly, particularly about the margin of Tennesee River and Indian Creek; men frequently died in the second or third chill. The common practice, from what I can learn, was to give an emetic of antimony, follow it with 20 grs. cal. and 20 of jalap—upon this a dose of West India castor oil; next day an ounce of bark and a grain or two of opium. Those who lived after it, reflected great credit on the doctor, and gained him the reputation of being a "bold practitioner."

During the second lustrum of our political existence, the intellectual and professional character of our practising physicians gradually improved; there were men of proper education and undoubted genius occasionally among them; but unfortunately there was a wild, speculating, and gambling spirit abroad in the country, and the morals of the card table were introduced at the bed-side of the patient, and into the office of the preceptor,—successful tricks unbecoming the dignity of the profession were called "smart," and gentlemen did not deem it disgraceful to gamble with their own pupils.

Case.—Dr. H—— arrived a stranger at the Planter's Hotel; the landlord introduced him to a sick traveller, sinking in a typhoid fever—"He should be bled," said Dr. H——. "Bled," echoed the attendant physician. "Yes—bled! or he'l die." This gentleman accomplished two objects with this short sentence, he disgusted the attendant, and captivated the patient. With some difficulty he managed to stain the bed clothes with a little blood—then gave hot brandy toddy, and pursued a vigorous and judicious tonic course of treatment. He charged this patient $500 for ten days services, and lost it with him at cards in less than half as many hours. This gentleman had professional skill and tact enough to have taken and kept the lead anywhere in this region at that time, and been an honor and benefit to society. He charged high for his services, yet made nothing; he played skilfully at cards, yet lost everything.

It is true, that the head of the medical profession in this county in itself is but a low elevation, and has been occupied by men who have had as much life sacrificed to their transient reputation, as has for the same period been crushed out under the wheels of a Juggernaut. But, about this period of our medical history Doctor Thomas Fearn, without *aspiring* to it, by common

consent occupied this position, which as long as he remained in the profession he retained by the exercise of qualifications that would have placed him in the same relative position in much larger fields of operation, and better educated communities. And though he did not travel up the tangled path of medical eminence without having "his heel bruised," this consent at length became so unanimous, both within and without the profession, that even respectable men were laughed at for presuming to compete with him.

Case.—A row at the "Bell"—A man stabbed—Dr. O. called in:—He had been introduced as an accomplished surgeon, by a political or a religious party, and praised like a new preacher; he found the wound too deep for him, and half a dozen lay brothers as bloody as "Septembrisers" who were holding and helping. The man fainted, a murmur ran through the crowd, Fearn's name was mentioned. The doctor probed away and said nothing; he fainted again, and the doctor reeking with blood pronounced the wound mortal! There was a universal shout for Fearn. The man who had commenced this operation with a Bowie knife, feeling some interest in the issue, was bringing Fearn to his assistance, who understanding the *entire nature of the case*, had armed himself with an Assilini's forceps; (a slight modification of which the English call "Liston's Bull-Dog," instead of his petty larceny,) with this he seized the bleeding vessel, and without assistant, or scarcely soiling his fingers, secured it. When he was about to depart, the patient asked him at what time he would see him again, "You may come to my office in the morning," said the Doctor, "and some of the young men will attend to you."

The influence of this gentleman's reputation upon the profession was favorable to the residence of thorough-bred physicians in the neighborhood, many of whom he had been directly instrumental in educating; another consequence followed, quackery and empiricism abated. Although quackery is indigenous in the human heart, like thieving and lying, and always will exist, yet it flourishes in the indirect ratio of the science and general qualifications of the regular part of the profession. When regular, and extensively patronised physicians, armed with all requisite diplomas and the experience of years, suffer themselves to grow so dull in diagnosis as to bleed a typhoid patient half an hour before death in the evening, that they had been stimulating

through the day; or so far forget, or compromise the dignity of their high calling, as to practise "Mesmerism," or prescribe "Mother's Relief!" to a parturient woman, men of smaller pretentions, and more professional pride, or better information, should not, and do not wonder at quackery springing up around such like mushrooms in a spring morning, where a fat cow has lain over night, and warmed the soil for their reception.

Case.—A political doctor was called from the "stump" to extract a bullet from the belly of a friend; after probing and searching for a time, a doctor differing in politics, not of great respectability in his profession, suggested to the surgeon, to let the ball alone and attend to the general symptoms of his patient; a stormy consultation ensued. Stop, said the first surgeon, I will state the case to the crowd, and be governed by their instructions. "Cut it out," said the crowd, but the poor man had himself "*cut out*" before the doctor returned.

Many of these early doctors are yet living; I have, therefore, avoided mentioning their names, for, like Dr. Atkinson of York, when I speak of live doctors, "I proceed warily, skimming over them and their names, as if I were kicking a wasp."

The population of Madison county, in 1830, was as great as at present. The endemics* consisted then as at present, chiefly of bilious intermitting and remitting fevers, during the summer and fall; continued and typhoid cases of the same, together with inflammation of the thoracic viscera in the winter and spring, but of a more grave character; it was not uncommon, then, for a case of congestive bilious fever to terminate fatally in forty-eight hours; now, under fair treatment, it is very uncommon.

Case.—Two carpenters, both stout young men of about 24 years, while engaged in shingling a house on Saturday, 21st July last, had each a chill. The thermometer in the direct rays of the sun on the ground stood at 148°, and in the valley of the roof where they worked was much higher. Beal laid on the shavings until he felt better, then rode eight miles in the country by two o'clock, and continued riding until after night. Walker went home and laid on his bed. Beal returned Sunday night, and lay in the room with Walker. On Monday morning I saw them both, and gave each 10 grs. calomel and 5 grs. pulv. Do. Walker

* "Diseases which are originally engendered and propagated in certain countries as in their native soil."—*Mead, Med. Works*, p. 309.—*Gal. Com. Hip.* 1. *Epid.* p. 242.

was hot, restless and silent, his surface red, tongue brown, pulse full, but soft, numbering 120; he said his fever had been much higher. Beal was restless and noisy: skin pale, tongue white, pulse irritable, numbering 130. I prescribed oil, if requisite, at sundown, and left 30 grs. quinine for each, to be taken in 5 gr. doses one hour apart, commencing at midnight. The mercurial carthartic acted on Walker; Beal took pills (ext. col. comp.) in place of the oil, at sundown, which acted. Towards midnight the fever in both cases abated. Walker took his quinine, Beal refused, though frequently urged. On Tuesday morning at eight o'clock, Walker, though oppressed, was as comfortable as a very sick man could expect to be. Beal said he also felt much better, and would take his quinine directly; he was pulseless, and in less than an hour dead. Walker recovered after a severe attack. Mild, mercurial cathartics, combined with gentle anodynes, cold *continuous* affusions, when the skin became hot and dry, and 15 to 20 grs. of quinine daily, were employed in his case.

The temperature of the atmosphere about the head waters of the "Forks of Flynt," is generally a few degrees cooler than with us, and there our earliest cases of essential and symptomatic fever take place, and linger longest; the balance of the county (except the river, and creek margins) never was very sickly, and is now one of the healthiest regions in the Union. If any one who is used to topographical observations will cast his eye over our diversified surface, he will see at a glance all that is essential to health, comfort, and long life. The boundaries of our county are mountainous, the northern part covered with immense heavy timbered flats, the central portion undulating and the extreme south bounded by a large river that carries off the comparatively insignificant swamp water; and the whole traversed by numerous rivers, creeks, and streams, that supply sufficient water for all industrial purposes. Nature has done her part, and if white men would lay their hands to the plough, and put the rich soil to the question, it would respond to "some an hundred, some sixty, some thirty fold."

Our physicians do not now use as large doses of quinine as formerly; these enormous doses, 100 grs., during the apyrexia, were introduced by Dr. Fearn, in a few specific cases, after anxious consideration, and were continued in the most empirical and thoughtless manner, by physicians and families, and of course without a corresponding result.

Case.—A negro girl on the plantation of Mr. Fennel, in 1838,

a few days after parturition, had a chill about mid-day; a violent fever followed, which subsided next morning; her master, who had given he a large dose of calomel, gave her at intervals of an hour, three 20 gr. doses of quinine, and with one drachm of this medicine in her the chill returned at the hour. When I saw her, the same evening, she was hot, dry, and restless; her pulse fluctuating, and mind wandering. I *poured* over her *slowly* two buckets of cold water; her system gradually reacted, and towards morning the fever abated. I *gave* her 20 grs. of quinine, and directed three more doses of the same size; her master, without knowing that I had given the first, gave her another immediately; her old mistress, who had gone to look at the clock, returned and gave her a third scruple; in due time the gentleman gave her his second (4th) dose, and in a few minutes the lady gave her another (5th) dose; in another hour the girl received two more scruples. I saw her at mid-day, she had no chill; her surface was clammy and damp like the back of a frog; she was deprived first of her hearing, then of her vision, then of feeling, and lastly of her speech; candles and pistols were flashed and shot about her head, and pins stuck in her. I *dashed* two or three buckets of cold water on her *suddenly*, ordered warm stimulating enemata, and wrapped her in warm blankets. In the course of the night she felt a pin scratch, at length her eyes followed a candle and she spoke; in a few days her hearing was restored. I have not for many years had occasion to give such large doses of quinine; 15 to 25 grs. I find sufficient; our diseases have moderated, or we over-dosed them. Dr. Fearn considered large doses of quinine sedative, which is certainly true, and the same may be said of large doses of brandy.

Case.—In 1835, some young gentlemen, for amusement, gave a mulatto boy of about twelve years, half a pint of strong gin; he danced about a while and sank upon the floor, cold, clammy and senseless; they carried him home and his mother sent for a "steam doctor," who gave him brandy and pepper (No. 6) and a steam bath! In the morning "the crowner set on him," and on my evidence pronounced a verdict:—that, although the first dose was sufficient, it was the last drop that run the cup over.

From 1830 to 1835, our county was infested by these disciples of Thompson, calling themselves Botanic Physicians—but regularly known as steam doctors. They were generally discontented and indolent mechanics, unemployed overseers, with a

few illiterate preachers, and many respectable planters who were in the habit of thinking for themselves in politics and religion, and felt safe in entertaining their own views of physic also. The immediate evils which this class inflicted on society were chiefly among themselves, and though great, were small to the remote effects. *They* were the *Grubs* of the race, whose externals warned men at sight, and passed off with the season to go through a sort of *pupa* or *chrysalis* state, at some obscure college of quackery in Ohio, or Memphis, where they learned to smatter technicals, and returned full blown insects of various kinds, such as hydropathists, phrenologists, homœopathists, mesmerisers, half-bred regulars, and college bred steamers!

We are not *subject* to epidemics of any kind. The cholera has never been nearer than Fayetteville, Tennessee. The winter of 1832—3, like that of 1849, was so mild and moist, that meat almost universally spoiled in the spring. Bowel complaints prevailed to a great extent during both these seasons but not a single case of cholera of which it seemed the representative.

Case; 1833.—A man named Beasly, who had committed some offence in Tennessee, fled to this county, and was found dying with the cholera, where he had secreted himself from justice.

Case; 1833.—On the plantation of the late Dr. James Manning, seven miles west of Huntsville, I saw twenty cases *down* with all the various grades of diarrhea; a fortunate application of moderate doses of calomel and opium reduced my patients to seven, and these were convalescent. The overseer, in consultation with the mistress, treated the sick to mutton soup; during the succeeding night two of the seven purged to death, and two more died during the day.

This past season the diarrhea broke out in the northeast part of the county; there has been some difficulty in its management, though but few deaths have occurred.

Case; 1849.—Two negro women on the plantation of Corbin Lewis, Esq., eight miles northeast, were taken with bloody diarrhea on Tuesday; on Thursday the oldest died; on Friday I prescribed (cal. grs. x. opii gr. i. twice daily) for the other, she recovered.

Case; 1849.—Every hand on Benjamin Tiller's plantation, 5 miles N. E., and four or five of his children, were seized in the

course of a few days in May, with bloody diarrhea—I treated these cases with small doses of calomel and opium, opium alone and Dover's powder, until the purging ceased, and applied a large blister over the abdomen. The negroes all recovered; his son, a boy of about 12 years, who refused his physic and tore off his blister, died within 48 hours of his attack. In a few days a delicate little daughter, as gentle as a lamb, was seized and carried off, leaving her parents without consolation, and her physician without excuse.

Case; 1849.—On the 22d of July I saw a mulato boy of about 18 or 20 years of age—(servant of J. H. Lewis, Esq.)—he had been griped all day, and taken 1 gr. opium and 20 drops laudanum; about midnight he had discharged from his bowels a chamber pot half full of pure blood; he was restless, with a small, feeble pulse. I ordered a clyster of cold water; gr. $\frac{1}{4}$ opium and grs. ii. sac. saturn. every two hours, and 3 grs. tannin between the doses; bathed his abdomen in turpentine and applied a blister; before daylight he had another large discharge of blood, so pure that it clotted. The cold water clyster repeated; there was no more purging on the third; restlessness continued. mustard applied to his extremities; slept well through the night; during the day he had taken chicken water prepared after Sydenham's directions; a slight reaction in the morning gave some hopes; towards midday he became silent, then delirious, pulse failed, a profuse discharge of blood, dissolved and putrid, carried him off.

Examination twelve hours after death.—The large veins of the abdomen were as empty as the arteries; the stomach showed signs of recent and remote inflammation, in places thickened, in places softened. The entire internal surface of the intestines appeared washed, and for several feet together sprinkled over with red sanders, and occasionally stained in large patches. The follicular glands were enlarged and indurated, feeling like seed sown under the surfaces, or in the language of Baillie, "fissured upon it so as to resemble little common warts." About three feet of the termination of the ilium was unusually porous, the emunctories appearing large enough to admit a small probe.

In the Spring of 1833 we were visited by the scarlet fever in its most malignant form; during the prevalence of this epidemic more than fifty infants perished in Huntsville, at the only age they are not an annoyance here. I treated nine bad cases, and four terminated fatally; I lost nearly half in almost every in-

stance. An older practitioner was called in, but I am not certain that in their own proper practice they were more fortunate. In more than one instance there lay more than one dead child in the same house at the same time. I feel certain that this was a most malignant disease; but I do not feel certain that in every case our best physicians remembered the united counsel of Hippocrates,* and Ovid,† that "nothing does good but what may also hurt;" and which should never be lost sight of by the man of medicine.

With some variations of the rules laid down by Dr. Currie,‡ cold water had been skilfully and successfully used in our malignant forms of bilious fever, particularly in the different stages of that type vulgarly known by the name of "congestive fever," marked by great restlessness, a pale, shrivelled and dry surface, producing on the mind of the patient a sensation of heat, but on the hand of the physician that of cold, a compressed, irregular and wiry pulse, and a consequent *congestion* of some central organ. If I understand the use of cold water in these cases, it is the reaction that is desired, and if this is not effected, in every instance it does mischief. Erasmus Wilson regards cold water as a sedative, and even compares it with belladonna and opium.§ But this is certainly not always the case, and depends much on the mode of using it. If a patient be laid at the distance of six or eight feet, and a large bucket of cold water *dashed forcibly* over him, there is nothing sedative in it; it arouses everything to action—*if there is power left to act.* But if he be set upright in a tub, and pitcher after pitcherful of cold water poured slowly over his head and shoulders, the vital action may be reduced even to Zero. This is he mode I use when the "skin is hot and dry."

* *Lib.* 1, *Epid.*

† *Lib.* 4, *Trist. Mead.*

‡ The Rev. Dr. Hancock, of Lothbury, recalled the attention of physicians to the use of cold water, as the "*Febrifugum Magnum*" in 1722. (Bateman.) This penchant of reverend gentlemen to improve the art of medicine is charitable, seeing physicians generally evince so little taste to reciprocate such favors. After this Dr. Currie, of Liverpool, fastened the attention of the faculty upon it by deducing certain rules for its application; the principal of which is, whenever the skin is "hot and dry."

§ Both cold affusion and belladonna appear to me to act therapeutically by virtue of their sedative effects upon the nervous system—cold affusion has been used with great advantage in fevers, and the sedative powers of opium have lately been employed in France for the purpose of checking inflammatory action.—*Diseases of the skin, p.* 72, *Lond.* 1847.

With these views of the therapeutics of cold water, and the fatal treatment in the spring of 1841, I resisted its application in the second visitation of this fatal disease; because in scarlet fever there is the reverse of the state of things in congestive fever. The congestion here is on the surface—the direct action of the water is likely to be so severe as to render any reaction after it of but little service—or, if it should take place, of doubtful propriety, being in a tissue already tumid with arterial action: if it should not take place, *retrocession*, in a large majority of cases, will—and we thus fall under the censure so forcibly expressed by Rayer, in his great work on diseases of the skin*—and because, in 1836, I heard the late Baron Alibert express himself against the use of cold affusions in scarletina, in the most decided terms. These views he had entertained and maintained through the storms incident to an eminent Parisian practitioner and the experience of a long professional life, with the calmness of conscious right not common to medical controversy, and the skill of an accomplished philosopher; he reiterates them in the last (2d) edition of his splendid monographie, in a manner to satisfy any one of his thorough conviction of their truth.† He recommends warm baths, mustard foot-baths and sinapisms, in case of interruption of the eruption. Rayer,‡ Wilson§, and even Bateman,‖ restrict the use of cold water to the middle stage of the disease; (S. Ang.); and though the latter wrote of it as if he were writing the biography

* A benign scarlatina may nevertheless become dangerous by the retrocession of the exantheme provoked by an incendiary treatment, or by the impression of cold.—*Diseases of the Skin, vol.* 1, § 259, *p.* 215. *Paris*, 1835.

† Je recommende à mes élèves de ne recourir qu' avec une extreme circonspection aux affusions d'eau froid, qui ont été préconisée de nos jours, et qui portant ont été funestes d'apres des expériences assez recentes.—*Monographie Des Dermatoses. p.* 248. *Paris* 1835.

‡ D'un autre coté les Medicins qui ont le plus preconisé les lotions et les aspersions, froides, (*Currie, Withering, Bateman, Thompson,*) declarent cette varieté, (*S. Mal.*) elles ne sont point avantageuses.---*Rayer, Mal. de la Peau. tom. I.* § 263, *p.* 219. *Paris*, 1835.

§ The surface of the body may be sponged with warm vinegar, but the use of cold water, so agreeable and beneficial in S. Ang., is painful and injurious in the malignant form.---*Wilson, Dis. of the Skin, p.* 73. *Lond.*, 1847.

‖ The active remedies which act so favorably in S. Ang., especially the cold washing, are altogether out of place here.---*Bateman, Synop., p.* 87. *Phila.*, 1818.

of a friend, and recommended it in the very language of Currie, he was content himself to use cold sponging of vinegar and water, from the prejudices of mothers and nurses. I will not say how much of his great reputation may have been preserved to him by these instinctive prejudices; but I do not hesitate to say that an opposite course of treatment, though used recklessly by a class of charlatans among us, favored the dying reputation of "steamers," and gave their friends something to boast of, when compared with the "cold water" treatment.

Where there was great cerebral action and a tardy development of the eruption, (S. Sine Erup.,) or an unfortunate retrocession, I have placed my patients in a warm, weak, mustard bath, and after laying a blanket close round the neck and over the edges of the tub, to shed the water, poured several pitchers-full cold and slowly over the head. These are the only cases, and this the only mode that has fallen under my observation that has not proved mischievous.

The different stages of scarlet fever having received specific names, generally receive specific treatment also—the first stage, S. S., requires none by common consent; for Rhazes, who confounded it with measles and small-pox, treated the mild cases with light diet, cool air and sub-acid drinks; and Sydenham asserts that none die except by "nimia Medici diligentia." This opinion is endorsed by the best medical authorities living or dead, since his day, Bateman,* Alibert,† Rayer,‡ Wilson,§ Wood,‖ &c.

In the second stage, (S. A.,) the battle of the waters is fought, the cold water men grow warm, and the warm water men get cool. In the third stage, (S. M.,) the respectable cold water au-

* It is scarcely necessary to speak of the treatment of a disease, which has been pronounced by great medical authority fatal only "by the officiousness of doctors."—*Bat. Synop., p.* 73.

† Si l'exanthème suit sa marche ordinaire, on se borne à administrer quelques boissons agréablement acidulée.—*Alibert, mon. des Dermat, p.* 247.

‡ La S. Simp. chez un sujet bien constitue, qui n'a pas récement eprouvé des maladies aguë ou chronique, est sans danger.---*Rayer, Mal. de la Peau, tom. I., p.* 25.

§ The treatment should be of the simplest kind, Sydenham remarks, &c.---*Wilson, p.* 70.

‖ In a vast majority of cases scarlet fever would end favorably without treatment. Hence the reputation acquired by homœopathy in this disease.---*Wood, Prac. Med. Vol. I., p.* 406. *Phila.* 1847.

thorities retire. The fourth, (S. S. E.,) is an incident to the other three.

If our epidemics were S. S., we fell under the censure of Sydenham. If they were S. A., the inefficiency, at least, of cold water was proved by the voice of wailing from almost every house in the village. We resembled the Egyptians at the slaying of the first-born, " for there was *scarce* a house where there was not one dead." If, as I have asserted, and as the graveyard testifies, a large portion of these cases were of the malignant form, the Huntsville practice must needs run the gauntlet of every respectable authority, from Rhazes of the tenth century, to Wood of the present day.

In the autumn of 1835, a case of small-pox appeared in our village and terminated fatally ; some dozen cases followed, most of which perished. The authorities procured a temporary hospital, and appointed Dr. Patton to attend it; and though he performed the severe duties of his charge faithfully, skilfully, and promptly, yet every thing that he did not manage was badly managed. The provisions were but indifferent, the house open, the nurses partook of the common alarm ; a cold rain prevailed; many of the patients were chilled or wet in the vehicle that conveyed them from town, and in some instances moribund on their reception at the hospital.

My treatment was pretty much that laid down by Dr. Meade: bleeding, gentle aperients, cool air, sub-acid drinks, mild anodynes, and vitriolic infusion of barks. Although the purgative part of this treatment embroiled the faculty of the early part of the 18th century, to such a degree that the like had not been heard since the days of Guy Patin and Antimony—shaking the authority even of the celebrated triumvirate, Mead, Friend and Radcliffe, and who on their part embalmed one Dr. Woodward in their gall, and handed him down to posterity, like a "dried preparation," as a specimen of the folly of small men who attempt to run against " the throned opinions of the world"—and a proof that " polite literature does not always polish its possessors"—yet we of Huntsville were too willing that our brethren should have our cases, to question closely each others practise.

Although the therapeutic treatment of small pox has not materially varied since the days of Rhazes, who seemed to consider it as natural to man as a change of voice to adolescence, indeed

an incident to this stage of life*—yet its prophylactic treatment is the greatest benefit the human family has ever received from any one member of the medical faculty. Such is the contagious nature of this pest, that Rhazes, A. D. 900, without recognizing this cause, asserted that "except here and there one, nobody escapes it;" and such was its virulence in 1747, that the venerable Dr. Mead scorned his learned friend Boerhaave for presuming to hope "that some time or other an antitidote may be found against this contagious poison," (Aph. 1390,) and compared his views to the designed ravings of an alchemist.† In 1835, it visited a population of 2,600, immediately surrounded by 26,000; it attacked less than one in a thousand, but with the violence of Rhazes and the fatality of Mead—showing its ferocious nature as a caged lion does upon a single victim that imprudently happens within its reach—which shows that Dr. Mead, though 'Physician to his late Majesty King George II.' and a dignified and learned gentleman, was not a prophet; and that Dr. Jenner, though poor enough, God knows, was not the equivalent of a mountebank. And it shows another thing—that, notwithstanding alchemy, witchcraft, mesmerism, homœopathy, *et id omne genus*, there is an imperishible germ of truth in medicine; and that there are other true medical philosophers, who, when they catch a glimpse of this cynosure through the mists of quackery that obscure almost every horizon, may exclaim with Dr. Mead: *"non sibi, sed toti gentium se credere mundo."* (Lucan.)

The spring of 1849 commenced wet and cold, pleurisies and pneumonias prevailing. As the season advanced, diarrheas of every degree and character supervened, but not a case of *cholera*. Several cases of *purpura* occurred in the neighbourhood, the first of a decided character that has fallen under my notice here.

Case.—A servant of Mr. Leftwiche, æt. about 14, who had been subject to chills for a few months, was taken with bleed-

* For without doubt, as urine naturally ferments until it comes to perfection; so the blood undergoes the same alteration in passing from its first to its second state.---*Rhazes on Small-pox, Mead's Trans., p. 360. Med. Works.*

† The principles and elements of things are so certain and so well established by the permanent laws of nature, that whosoever would endeavor to change them would act like those philosophers by fire, (as they style themselves,) who labor hard to transmute the baser metals into gold, and actually extract gold out of the purses of the ignorant and credulous by the fumes of their charcoal.---*Mead, Med. Works, p. 330. Lond., 1762.*

ing at the nose; this continued for several weeks, with more or less inconvenience. When I saw her, early in June, the bleeding was so profuse that I plugged the posterior nares. Next morning the blood was oozing from the other nostril, and she had passed it from her bowels. I gave her elix. vit. and an infusion of bark; towards evening the blood issued from her ears, eyes, mouth, and every mucus opening in her body. She had the appearance of Lucan's child bit by the Lybian serpent, with the exception of the bloody sweat; and I am not certain that her cheeks did not sweat a colored ichor that stained her pillow, for her profile when she slept was marked in blood upon it.

> ——————"So from the pores
> Of all the parts flowed ruddy venomed gore,
> ——————Nature's passages,
> For their own humours were all filled with blood;
> *Her* mouth, *her* nose, choked up with filthy clots,
> Red sweat transpired from all the skin inflamed,
> *Her* body seemed one universal wound."—(*Lib. ix. v.* 806.)

Her very black complexion presented the appearance of discolored spots. Her pulse was feeble and skin cold. I dashed a bucket of cold water on her, wrapped her in a warm blanket, and gave her hot wine whey; a slight reaction followed, and she rested well that night. In the course of the following day the hemorrhage ceased, and she died comatose towards night. I did not open her, but believe there was an effusion in the ventricles—it was the only fatal case I heard of.

Recapitulation.—We have less than 30,000 inhabitants, and 30 physicians in the county; that is, one physician to each thousand. We collect annually about $30,000, or $1 from each citizen. This county consumes more than $10,000 worth of medicine, or 33 cents worth of physic per head. There are 50 lbs. of calomel consumed yearly, which is about 30,000 doses of 12 grs. each, or one dose per head; and 1,000 ozs. quinine, or about 90,000 doses of 5 grs. each, or three doses per head.

There has never been an instance of a physician getting rich in this town by his practice, and but few in the county. Dr. Fearn, who enjoyed the most extensive practice and greatest

reputation of any one man, quit the profession to engage in commerce; so did Dr. Wyche, who had the next largest practice in the county. They are now both merchants of your city.

The $30,000 which the county pays her physicians is but *bread*, and scarce at that; and when we contemplate the 50 lbs. calomel and 1,000 ozs. quinine which they swallow, it reminds one of Falstaff's bill of fare: "But one half-penny worth of bread to this intolerable deal of sack."

Clinical Reports.

Case 1—*Excavation of the Tibia.*—W. N. Lynch æt. 30, strong and active, a farmer and the son of a farmer; supposed that he had injured his leg while a boy, driving oxen. About 1830 his father consulted Dr. Fearn, who opened a deep seated abscess below the knee; in 1838 I opened another somewhat lower down. In 1841, suspecting a *sequestrum*, I advised an extensive operation, in search of the cause of so much suffering, similar to the one about to be described; he declined at that time, as he has since informed me, on account of my apparent want of confidence in it. Ointments, bandages, pukes, purges, hyd. pot. &c., were resorted to, together with several small operations, such as cutting down upon the bone with a promise of certain cure.

In 1847 he renewed his application to me, expressing a willingness to have his leg amputated to relieve his sufferings, which were constant and sometimes severe, unless his leg was elevated and his body depressed. I found the limb enlarged from the knee to the ankle, and a small fistulous opening about two fingers breadth below the articulation of the fibula, running into the solid structure of the tibia.

Feb. 8th, 1847.—Aided by the advice and assistance of Dr. Fearn, who had retired from practice, I cut down upon the inner side of the tibia, commencing near the insertion of the *semi-tendinosus;* the integuments were laid aside by carrying the upper part of the incision in the direction of the tendinous fibers of the *sartorious*. The periosteum, thick red and sensitive, was removed, and the bone entered with a trephine; after penetrating over an inch, without indications of a cavity, the centre piece was removed with a gouge; it was compact,

nearly solid, the wounded bone which was evidently a morbid structure, bled freely. The trephine was applied about an inch lower and another piece removed of the same character; this operation was continued down the limb to within two fingers breadth of the inner ankle, where a natural cavity containing healthy medulla was first met, signs of which appeared about two fingers higher up. There were seven pieces or plugs of bone removed, and the *mortise* cleaned out with a saw and gouge. There was little left of this tibia but the hard external crust, which was cut through at the entrance of the fistulous opening, from the opposite side. The original cancellated structure of the head of the bone had solidified and was entirely removed by the gouge, through the opening below, into which the back of Bell's Anatomy might have been *tenoned.* The cavity was was filled with lint and dressed with a light roller. The operation occupied nearly two hours, and was extremely painful. For the first two weeks chilly sensations and a pale condition of the wound indicated the free use of wine and bark. On the 6th April he went home; in eight months he believed himself to be well; in twelve months he found employment, and to this time, upwards of two years, he has not complained.

After suffering without ceasing about eighteen years, he submitted to a painful and tedious operation; he has since assured me, that from the moment the first piece of bone was removed, and the blood flowed, he had suffered no more of *his peculiar* pain, and after the wound was first dressed to the present moment he has not suffered any manner of pain. I required him to keep his bed for six months and not to walk under a year.

Case 2.—*Excavation of head of Tibia.*—Negro boy of Richard Pete, Esq., of Limestone county, æt. 12 or 14. I could get no other history of this case except that he had taken cold in his knee about a year previous; had suffered a great deal, lost his appetite, became ashy, and fallen off. I found the tibia enlarged and tender from the knee half way down the limb.

March 23d, 1848. I operated in the same place and manner as in Linch's case; found a similar, though less extensive morbid condition, the solidity being confined to the first six fingers, which was removed by the trephine and gouge. The operation lasted over thirty minutes, and was painful. The

periosteum was more thickened and tender than in case 1. The morning after the operation he asked for food, and continued to improve without constitutional treatment until the 20th June, when he was sent home; he is believed to be well, though he is, as he always was, a delicate and strumous boy.

Case 3.—*Caries of Inferior head of Tibia.*—March 6th, 1849. Requested by Mr. Giles to see his son, a scrofulous boy, about twelve years of age. He had suffered near a year with an enlarged ankle. A neighbor had opened it with a pocket knife; I found him very much reduced, pale, coughing, loss of appetite and temper; his right ankle anchylosed, greatly enlarged and surrounded with fistulous openings; there is a case pictured on 110th page of Liston's Prac. Surg. not unlike it; such legs are generally amputated. I put him on tonics and hyd. pot. without advantage; I explained the nature of the case to the father and son, and proposed an operation to save the foot; it was cheerfully submitted to, though I had not expressed much confidence in it myself.

May 19th. I cut down and found the entire extremity of the Tibia necrosed, a heavy callus formed round it, in which there was an oval opening the size of half a dime, through which my probe had felt the dead bone. By enlarging this opening I was enabled to remove with forceps about two inches of the tibia, including the articular extremity. This operation was not very painful. The wound was filled with lint and dressed with a scarf.

The extreme offensiveness of the suppuration gradually abated; port wine and bark continued; a few small pieces of bone passed out at the wound and one from the opposite side. He is gradually recovering his appetite and spirits; cough not troublesome; went home on the 12th July with a better ankle than he brought, and a better prospect of recovery.

(The following case was communicated to Dr. P. F. Eve, of Augusta, on 18th May, which either never reached him, or was not deemed suitable for the pages of his journal; I have not since heard of it.)

Case 4.—*Rigidity of the mouth of the womb.*—Friday evening, May 11th, at eight o'clock, I saw a negro woman of Mr. Ab. Sibely, in hard labor, in which condition she had been since

Tuesday morning, the 8th. The impediment to delivery proved to be rigidity of the os. uteri. It felt like an inch hole in a piece of parchment or hard leather; a head, together with a hand or foot presenting. The membranes broke on Tuesday morning; and again, on Thursday evening, large quantities of water flowed, and urine continued to dripple. During my examination, eruptions of fœtid gas broke from the womb; these had commenced the day before, and continued through the night, followed by the passage of clots, which, together with repeated vomiting, occasional purging, quick pulse, and hard, regular, agonizing labor pains, constituted the pathological condition. Gave 1½ grs. opium; 10 o'clock, no alteration, except the *pains*,, which continued hard and regular, were less excruciating. Gave warm clyster, 10 grs. Pul. Dov., and ordered 10 more in an hour; 12 o'clock, no alteration, no sleep; *pains* continued regular, but tolerable; the mouth as hard as a *bone;* an effort to introduce two fingers left a crease under the nail. Gave warm clyster of starch and laudanum; 2 o'clock, no alteration; pains bearable; applied ʒij of chloroform on a sponge to the os, which remained as rigid as an ivory ring. She complained of its pricking her; in 15 minutes withdrew the sponge; reapplied fresh chloroform, and suffered it to remain 30 minutes, without effect. At 4 o'clock, being satisfied by the present and approaching symptoms, of the danger of delay, I introduced a probe pointed bistory, and nicked the os in two directions. The parts yielded under my finger, producing the impression of a clipped mesentery or cut drawing string; there was no further tearing; a leg came down; I sought another, and delivered a semi-putrid fœtus of about 7 months, and immediately another, with great ease. Up to the 17th instant, her condition, though improving, remains critical. P. S.—I understand she since died.

My first *observation* on the above is, that brandy, opium, ether, nitrous oxide, chloroform, are all anæsthetic agents, *and as such*, all act on the system precisely alike, differing in degree and manner only; that their anæsthetic influence is the result of intoxication, more rapidly on and off in the one case than in the other; and that the danger accompanying the effects is in the ratio of the activity or rapidity of the agent employed.

A gentleman desiring his finger lanced before the introduction of ether, drank half a tumbler of brandy; while he anticipated the operation it had no effect upon him, and not having *sufficient courage*, he left my office; in a few minutes I found him in his own counting-room, drunk! and lanced his finger with little or no pain. I am satisfied that sufficient brandy to have overcome the terror he evinced at this operation, would have endangered his life.

A vagabond may lay drunk a week, and be proof against the torture of all the boys in the village; or swallow opium until he is insensible to the hot iron and cold water of all the doctors, and yet all the involuntary movements of heart, arteries and bowels go on, and in a few days he will arise from the curse of the serpent and walk upright among his biped brethren. I saw a woman bear a child, so drunk she did not know what she was doing, and I am sure she did not *feel* her pains.

Opium was introduced as an anæsthetic agent, from which laudanum received its wonderful name—chloroform may be more fortunate. The most reliable anæsthetic agents, however, are a sharp knife, a clear head, and steady hand.

My second observation is, on the Scriptural objections to the use of these agents. It is truly humiliating to science to have to stop and rest upon her course until the dullness of the clergy can frame an excuse for an obvious truth—to see such a man as Dr. Simpson, of Edinburgh, stopping in the midst of his *labor*, to chop logic by the way-side, like a monk of the 15th century, to endeavor to prove a truth at midday, by argument, which he had proven by practice in the morning, and thereby running at least a risk of losing by night what he had earned through the day. Let us examine in plain English his new translation of the Hebrew authority for the use of chloroform! and see if in getting one dent out of his turtle's egg, he does not put another in.

He says—"It is surely worthy of remark and wonder that the language of the Bible is on this, as on other points, strictly and scientifically correct, and long ago made with perfect precision the very distinction which we are now-a-days only recognizing. For the Hebrew noun, *'etzebh*, distinctly signifies the muscular contraction or effort, and the nouns, *hhil* and *hhebel*, as distinctly signify the sensation of pain accompanying those efforts. Now

the effort, or muscular contraction, (the *'etzebh* of the curse,) are left in their full and complete integrity under the state of anæsthesia; while the pangs or suffering, (or *hhil,*) against which the language of the curse does not bear, are alone annulled and abrogated." He here admits the woman to be cursed, which is not very obvious from the text, for this language is alone applied to the Serpent, and to the ground for Adam's sake. Now if the sorrow of conception and of parturition, does not mean the nausea of the one and the labor pains of the other, I cannot understand the nature of a *curse*—because mere uterine contractions, without pain, is no more a curse than elbow contractions without rheumatism. But Dr. Simpson says: "There are abundance of 'maternal sorrows' connected with children and child-bearing in civilized women, quite independently of the actual agonies of parturition." Then the curse rests on "child-bearing, independent of parturition!" which is contrary not only to Scripture, but to nature and to universal observation. Most barren women, like Elkanah's wife, pray in secret for children; and others, like Rachel, cry aloud, "give me children or I die;" and when at length "God hearkened to her and opened her womb," she said, "God hath taken away my reproach." Throughout the Bible, we find the fruitful, and not the barren womb the blessed. Manoah's wife praised God when her womb was opened by a stranger angel in the field, and did not sorrow until the pains of labor set in. Barrenness is only spoken of as a blessing, by a poetical license, to magnify some great calamity. The Psalmist tells us—"He maketh the barren woman to be the joyful mother of children; praise ye the Lord!" and Solomon, wiser than his father, says: "There are three things that are never satisfied—the grave, a barren womb, and the dry earth." I will add my testimony to David's, I have never seen a woman who did not rejoice at her first conception, and bear her burthen with pride and pleasure until labor set in.

Let us look a moment at the last clause of the curse—"*and he shall rule over thee.*" We need not go to Hyperborean regions, where, Dr. Prichard tells us, "the women are free and in Karafto rule their husbands," to find instances of the abrogation of this end of the curse. In certain Austral regions there

are full as many put themselves from under it, as are ever likely to escape the first clause by the aid of chloroform.

How much better would it be at once to say, when Moses recorded that in sorrow Eve should bear her children, it had no reference to chloroform, and that he was as ignorant of chemistry as Joshua was of astronomy. The Holy Bible claims to be a moral revelation. There is no evidence within its lids that any of the physical sciences was in a higher state of cultivation among the Jews than in other nations; nor am I aware that it claims any authority upon these subjects. And yet it is strange that this gifted race, that had the intellectual capacity to receive the revelation of a religion whose sublime simplicity dwarfs alike the complex grandeur of the Indian and the classic purity of the Greek, should have *left no other* evidence of their greatness, and like the Greeks, *retained* nothing of it but its recollection.

"Hoffman, who had the merit of first turning the attention of practitioners to the morbid affections of the nervous system," has been charged with having ridden his hobby to death; but as it is not my intention to arraign anew his opinions of this almighty agent in the animal economy, which seems to preside over and regulate the functions of the entire body corporal, more like a creator than a mere sovereign, I will for the present state my belief that modern physicians, in their bold treatment of the acute diseases of the South, have not always borne sufficiently in mind the possible remote effects of their *heroic remedies* on this mysterious— this almost spiritual organization. These convictions have been urged upon me by personal observations and reliable information on the diseases of our vicinity during the past year; and if sufficient matter be furnished me during the current year, I will in your next number refer again to this subject.

Since the fall set in, there has been but little sickness of any kind, yet the proportion of adynamic cases are perceptibly on the increase. This must be owing to some change either in the *agent* or the *patient*, the constitution of the atmosphere, or of the people; it may be to the overlapping of the choleric malaria, modified by the healthy or unhealthy atmosphere of our region; or to the normal action of indigenous causes operating on modified constitutions.

Twenty years ago, these cases were of rare occurrence, since which time two mighty agents have sprung up, each in its province calculated to effect a purpose. The atmosphere has become infectious with choleric miasma, and our systems have been charged with quinine. The enormous amount of quinine that has for the past fifteen or twenty years been consumed in this neighborhood, must have wrought an impression on the constitutions of those most subject to its influence. Numbers of cases have lately presented themselves of habitual chills, recurring every second, third or fourth day, which have required very large doses of quinine to check, and which return almost every eighth or tenth day. Since August I have treated eight successive cases of this description, (in every one of which quinine had failed,) with opium and plasters made of mutton suit and terpentine, or cloths dipped in warm turpentine, and applied to the pit of the stomach a half hour before the expected chill. In all these cases but one, the first chill was checked, and there was no return. Athough opium seems to have an excellent effect in those cases in which quinine has failed, I have sometimes succeeded with the hot turpentine cloths alone.

I was consulted in 1848 in five or six cases of night blindness that occurred in young negro men and women, on one plantation, and which both the owner and myself attributed to large previous doses of quinine.

Mr. H—— æt. twenty-four, who was in the habit of taking quinine freely, became typhoid in an attack of bilious pneumonia. I saw him after he had been confined ten days to his bed; his gums bled and he spat dark bloody mucus in small quantities. On 12th November he passed blood freely from his bowels; but opium, sug. lead, and tanin arrested it. I kept him by the use of these direct astringents, six days without an action on his bowels, and he recovered.

Mrs. G. had five chills in five successive days, notwithstanding she had taken daily large doses of quinine, (I believe from the quantity shown me from 80 to 100 grs. per day.) She was as yellow as buck-skin, and passing blood freely from her bowels, bladder, mouth, and nose when I saw her on the night of 10th December; she had no more chills. Opium, calomel and turpentine, were alone used; she died on the 15th. Her skin faded nearly white on the 14th. She had lived many years on or near

the river, and was accustomed to taking large doses of quinine. At the time of her death she had resided two or three years on a mountain 400 feet above the level of the town.

I am not prepared to say at present, what agency, if any, quinine may have in this change of character in our maladies; and far from wishing to bring into opposition two strangers under the garb of cause and effect. This kind of logic has been rendered contemptible by quacks of every age; at present my desire is to call the attention of the profession to the facts.

December has been accompanied by an unusual number of cases of typhoid pneumonia among the negroes, who are very liable to it, and which is very fatal to them. I believe the number of cases and the relative proportion of deaths among negroes, from pneumonia, is many times greater than among whites, after making all reasonable allowances for the exposure of the slaves. This rule I think, with similar allowances, is reversed in the bilious attacks of mid-summer.

REPORTS FROM ALABAMA.

ARTICLE II.—CONTRIBUTIONS TO THE VITAL STATISTICS OF MOBILE.—BY GEORGE A. KETCHUM, M. D.

DR. E. D. FENNER,

DEAR SIR,—At your request, and in conformity with my promise to you, I have prepared the following statistics of the mortality in Mobile. I have gone as far back as I could get any reliable information, and the tables I now send you, though not as complete as I should like, still have this recommendation, that they are *correct* as far as they go. First, a table showing the mortality of each month of each year, from 1843 to 1849, inclusive.

2nd. A table showing the proportion of whites, male and female, and blacks, male and female, that have died each year.

3rd. Table showing at what ages these deaths occurred.

4th. Tables showing the mortality, the age, sex, color and disease for 1844, to 1849, inclusive.*

5th. Some few statistics with regard to the yellow fever and cholera.

6th. A short notice of the Mobile Medical Society.

For the information contained in these tables I am principally indebted to the Report Book of our worthy Sexton, though many of the facts have been furnished me by my professional brethren.

The classification of the *diseases* is by no means perfect, for the names of the diseases are entered in the book by the Sexton, and of course he would enter them under the name furnished by the physician in attendance. As, for instance, a case of *trismus nascemtium* might be entered under the head of *lock-jaw*, and a distinction again be made between lock-jaw and tetanus.

However, with all their faults, I hope you will find them of some service to you.

I am, with great respect,

Your obedient servant,

GEO. A. KETCHUM.

Mobile, January, 1850.

* On account of the heavy expense, this valuable table must be postponed to our next volume, when it will appear with the addition of two more years' statistics.

TABLE SHOWING THE MORTALITY FOR EACH MONTH FROM 1843 TO 1849, INCLUSIVE.

	1843.				1844.				1845.				1846.				1847.				1848.				1849.				Total.
	Whites.		Blacks		Whites.		Blacks.		Whites.		Blacks.		Whites.		Blacks.		Whites.		Blacks.		Whites.		Blacks.		Whites.		Blacks.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
January	19	5	8	1	28	8	9	4	21	11	4	3	26	9	13	9	34	9	10	9	19	8	12	3	71	42	35	12	
February	19	6	5	4	24	10	9	5	27	7	7	4	18	6	13	7	25	7	11	6	29	7	13	8	34	17	15	13	
March	24	8	5	3	19	10	7	4	19	12	10	7	19	8	6	8	15	7	11	6	21	8	16	9	63	16	26	5	
April	18	7	2	5	26	7	5	4	22	11	3	5	20	12	12	7	6	8	5	3	17	12	11	4	25	21	13	7	
May	19	9	6	6	35	10	6	6	9	7	8	4	18	7	6	8	15	8	11	8	31	12	14	18	27	20	12	6	
June	14	7	1	9	16	10	6	4	16	11	4	3	14	10	9	5	15	11	13	7	29	16	19	13	29	7	12	7	
July	23	9	10	5	23	14	9	6	13	13	7	4	15	8	10	3	17	11	6	4	56	17	13	12	13	13	14	6	
August	24	15	8	8	23	15	4	5	11	13	10	6	19	7	0	2	23	16	8	5	34	13	10	8	24	17	13	13	
September	57	24	5	4	36	8	5	4	16	6	3	0	23	8	5	5	33	29	13	4	47	19	9	2	25	16	8	4	
October	106	42	11	3	31	16	5	4	22	14	6	3	27	8	5	4	43	15	8	3	36	17	6	6	41	19	13	9	
November	51	18	7	4	31	5	3	2	20	9	3	4	26	8	4	2	39	13	9	3	32	9	14	5	48	17	10	8	
December	22	12	5	0	19	5	8	7	12	7	9	7	20	7	1	6	25	7	10	8	37	26	10	9	31	16	8	8	
Totals	396	162	73	52	311	118	76	55	208	121	74	50	245	98	84	66	290	141	114	66	388	164	147	97	411	225	179	98	4510

A TABLE showing the proportion of Whites, Male and Female, and Blacks, Male and Female, that have died each year.

	WHITES.		BLACKS.		
	Male.	Female.	Male.	Female.	Total.
1843	396	162	73	52	683
1844	311	118	76	55	560
1845	208	121	74	50	453
1846	245	98	84	66	493
1847	290	141	114	66	611
1848	388	164	147	97	796
1849	411	226	179	98	913
Total,	2,249	1,029	743	484	4,509

In looking over this table, two facts strike the eye very forcibly—the great disproportion between the mortality among the males and females, and the whites and the blacks. The table shows a gross mortality of 4,509 for the seven years. Of these, 2,249, or very near *one-half*, are white males, and nearly three-fourths of the whole number are whites.

The males, white and black, number 2,992, and the females 1,513, or a little more than half the number of males.

I suppose these facts can be accounted for in this way: Our community is essentially a commercial one; many young men come here to engage in business, and bring no family with them; so that the proportion of males in our city is greatly over that of females. Again, they are exposed to all the exciting causes of disease, the inclemencies of the weather, exposure day and night at their business, and the toil and labor endured on our wharves and river. During our yellow fever epidemics, the mortality always falls most heavily on the white males.

A TABLE, showing at what ages the deaths occurred.

		1844	'45	'46	'47	'48.	Total.
WHITE MALES.	Unknown.	43	43	13	29	26	154
	Under 1 yr.	15	26	39	46	58	194
	1 Under 10.	17	17	22	22	72	150
	10 Under 20.	8	7	13	10	25	63
	20 Under 30.	44	32	46	49	70	241
	30 Under 40.	27	37	41	64	85	254
	40 Under 50.	25	19	33	37	37	181
	50 Under 60.	8	11	7	19	14	59
	60 Under 70.	7	3	4	5	6	25
	70 Under 80.	0	0	3	2	2	6
	80 Under 90.	0	0	0	0	0	0
	90 Under 100.	0	0	2	1	2	5
	Over 100.	0	0	0	0	0	0
WHITE FEMALES.	Unknown.	0	2	0	19	3	24
	Under 1 yr.	0	21	20	31	49	121
	1, Under 10.	0	32	18	25	60	135
	10, Under 20.	3	5	6	9	14	37
	20, Under 30.	13	30	14	24	14	85
	30, Under 40.	10	16	10	19	18	73
	40, Under 50.	2	4	5	10	3	24
	50, Under 60.	2	7	3	6	3	21
	60, Under 70.	0	1	2	4	2	9
	70, Under 80.	0	2	1	0	2	5
	80, Under 90.	0	1	1	0	0	2
	90, Under 100.	0	1	1	0	0	2
	Over 100.	0	0	0	0	0	0
BLACKS, MALES.	Unknown.	8	3	1	12	23	47
	Under 1 yr.	0	26	28	17	25	96
	1, Under 10.	15	6	19	18	20	78
	10, Under 20.	2	12	6	8	14	32
	20, Under 30.	5	10	7	9	14	45
	30, Under 40.	2	3	4	9	9	29
	40, Under 50.	5	2	8	6	5	26
	50, Under 60.	0	1	6	5	8	20
	60, Under 70.	0	3	0	4	4	11
	70, Under 80.	0	0	3	1	2	5
	80, Under 90.	0	0	0	2	3	8
	90, Under 100.	0	0	3	2	1	6
	Over 100.	0	0	0	0	1	1
BLACK FEMALES.	Unknown.	7	1	23	1	6	38
	Under 1 yr.	6	14	3	26	25	68
	1 Under 10.	5	7	6	11	22	51
	10 Under 20.	2	5	2	7	9	25
	20 Under 30.	1	9	10	3	5	28
	30 Under 40.	3	6	2	4	12	27
	40 Under 50.	2	1	4	6	8	21
	50 Under 60.	3	3	3	2	8	19
	60 Under 70.	0	1	5	2	2	10
	70 Under 80.	0	0	1	2	1	4
	80, Under 90.	0	0	2	0	0	2
	90, Under 100.	0	0	0	0	0	2
	Over 100.	0	0	0	0	0	2

This table shows the age of the greatest mortality among the males to be between the years of 30 and 40, and next between the years of 20 and 30. The whole number of white males dying between the ages of 30 and 40 is 254, and between 20 and 30, 241. More white females have died, however, between the ages of 20 and 30 than between the ages of 30 and 40. The proportion is 85 to 73.

Among the blacks, the greatest mortality is among the infants under 1 year of age, and next between 1 year and 10.

I suppose we may very readily account for the fact, that there are so few deaths at a very advanced age, by the simple statement that Alabama is a new State, and that Mobile is, as it were, in her infancy. Since the Americans have settled here, they have not yet had time to get old. New States and cities are nearly always settled by those in their youth, or in the prime of life, and but few old people leave the comforts of their homes in the old States to undergo the hardship of a new settlement. Consequently, I say, we have but a few old persons among us to die, with the exception of our Creole population, and among them the instances of longevity are quite numerous.

Statistics of Yellow Fever in Mobile.

	First appearance.	No. of deaths.
839,	August 11th,	714
1840,	None	None
1841,	None	None
1842,	September 3d,	
1843,	August,	313
1844,	August 14th,	40
1845,	November 9th,	1
1846,	September 11th,	4
1847,	August 2d,	78
1848,	August 18th,	24
1849,	July 3d,	21

Whole number of deaths in Mobile for ten years, from yellow fever, 1,225.

Statistics of Cholera in Mobile.

There were five deaths from cholera in 1848. The first case occurred on December 30th.

1848, Dec., there were		5 deaths.
1849, January,	"	52 "
" February,	"	18 "
" March,	"	33 "
" April,	"	14 "
" May,	"	7 "
Total,		129

REPORTS FROM ALABAMA.

ARTICLE III.—The mobile medical society.

The Mobile Medical Society* has been in existence under its present organization since the 12th June, 1841. It has had many difficulties to contend with in the way of its success, and has never seemed established upon anything like a permanent basis, until now. At this time there seems to be a strong disposition on the part of its members and those who participate in its proceedings, to perpetuate it and make it a source of lasting benefit to all.

They hold more frequent meetings than they did in times past, their meetings are more numerously attended, and more attention is paid to rendering the proceedings of practical utility, by the careful relation of interesting cases of disease occurring in the practice of the members.

The catalogue of the Society has the following names of active members. W. H. Anderson, J. P. Barnes, W. B. Crawford, A. B. C. Dorsey, R. Lee Fearn, E. P. Gaines, W. C. Hicklin, J. F. Innerarity, T. P. Jenkins, E. H. Kelly, Geo. A. Ketchum, A. Lopez, Dr. Massey, R. Miller, J. H. Woodcock, J. McNally, J. E. Nott, F. A. Ross, and N. Walkly. The officers for the present year are

R. Lee Fearn, *President.* F. A. Ross, *Vice President.*
Geo. A. Ketchum, *Secretary.* Jno. P. Barnes, *Treasurer.*
E. P. Gaines, *Librarian.*

* We are indebted to Dr. Ketchum for this historical sketch of the Mobile Medical Society. The abstract of its Proceedings is taken from the 3d and 5th numbers, vol. 6, of the New Orleans Medical and Surgical Journal. The Transactions are very creditable to to the members of the Society.

The Board of Health of the city of Mobile, consists of the President, Vice President and Secretary of the Medical Society. The Board for the present year, therefore, are

R. Lee Fearn, *President.* F. A. Ross, *Vice President.*
George A. Ketchum, *Secretary.*

The Board of Medical Examiners for Mobile county, consists of five, and are appointed by the Medical Society. Drs. Ross, McNally, Ketchum, Crawford and Miller, constitute the Board for this year. It is their duty to examine all applicants for license to practice medicine, in the county of Mobile, and to grant such license when the applicant exhibits sufficient evidence of qualification as in their judgment to entitle him to it.

Abstract of the Proceedings of the Mobile Medical Society.

Mobile, Friday, August 17, 1849.

Chloroform in Convulsions of Children—Yellow Fever—Croton Oil in Bilious Colic, used externally.—The Mobile Medical Society met pursuant to adjournment. The Vice President, Dr. F. A. Ross, in the chair. Drs. Anderson, Barnes, Gaines, Hicklin, Jenkins, Ketchum, Lopez, Massey, Miller and Walkly were present. Dr. Walkly stated that he had seen, since the last meeting, a very severe and protracted case of convulsions in a small child, in which all the usual remedies had failed to procure relief, and the child was fast sinking. He had administered chloroform by inhalation, and the convulsions had ceased, and the child had, up to this time, remained free from any recurrence of them.

Dr. Gaines read the notes of an interesting case of fever, which he thought had simulated yellow fever in many respects. The attack was characterized by pains in the head, back and limbs; dry, furred tongue; abdominal tenderness; nausea; a gaseous, bubling pulse, and much restlessness. The disease had run through its stage of reaction, and was in the state of calm which usually precedes, for a few hours, the stage of collapse, when another medical man was called in, who bled and purged the patient with the effect of hastening the collapse. In a few hours he died, having previously thrown up fluid

which the attendants declared to be black vomit. Dr. Gaines hoped that the Society would give their opinion with regard to the diagnosis in the case.

Dr. Moss remarked that it was difficult to decide upon a name for the disease without having seen the subject of the attack, as the symptoms described were to be seen in both yellow and bilious remittent fever. He said that within the last week he had been attending a child three months old, with convulsions, which had recurred from time to time for twenty days. There were intervals in the attack of apparent exemption from disease; but that the child at no time had a healthy appearance. Twenty-four hours preceding death, it had vomited a fluid resembling the lees of port wine, and the skin had assumed a lemon tinge. Here were symptoms usual to yellow fever, yet this could not be called an attack of that disease.

Dr. Hicklin inquired if there were not frequently cases of bilious fever occurring during August, September and October, where a black fluid was ejected. He had seen such cases in his practice in Mississippi. The black vomit generally appeared from the fourth to the eighth day. In violent cases, sometimes, as early as the third day. This disease was not called yellow fever there.

Dr. Lopez said he had seen dark ejections from the stomach in many cases, where there was much hepatic derangement. He had noticed that *drunkards*, particularly, threw up a fluid of this description during severe attacks of gastro-hepatic fevers. Pregnant women, too, he remarked, had vomitings, sometimes, of this dark colored fluid. So that he thought vomiting of black fluid was by no means a pathognomonic sign of yellow fever.

Dr. Ketchum said he had used croton oil in a case of bilious colic, as recommended at a preceding meeting by Dr. Nott. He had applied to the ubilicus first, four drops—and after a few hours, eight drops, without producing any purgative effect; though in the same case, a brisk cathartic action soon after was produced by one ounce of castor oil.

The Society adjourned, to meet again on Friday evening, August 31st.

FRIDAY, August 31, 1849.

Choloform in Epilepsy—Injections of Tobacco in Bilious Colic—Post Mortem in Dropsy.—Dr. Barnes called the attention of the Society to the case of a man who had entered the City Hospital, laboring under an attack of intermittent fever. On the fourth day he was seized with epilepsy, succeeded by phrensy of a violent character. He was treated very actively—brisk cathartics were administered—he was cupped freely, and blistered, but without relief. Chloroform was then resorted to, and under its continued use, the symptoms soon abated and the man recovered.

Dr. Ross mentioned a case of bilious colic in which tobacco injections had been used very successfully. The patient had been sick for a few days, when he very imprudently indulged freely in oysters, and was very soon afterwards seized with a violent attack of colic. The doctor stated that he saw him on the fourth day of the attack, in consultation with Dr. Innerarity. Sulphate of morphine had been freely used, but without any relief to the pains; the medicine seemed to affect the brain only. A warm bath was ordered, and tobacco injections administered; by these means relaxation was soon produced; croton oil was then given and it operated freely; warm poultices to the abdomen, and enemas of flax-seed tea, constituted the remainder of the treatment, and the patient rapidly convalesced.

Dr. Barnes stated the post mortem appearances exhibited by a patient who had died of general dropsy. The disease had existed about three months; though no treatment had been pursued until three days before death. The brain was not examined; effusion existed in both pleuræ and the pericardium. The heart was hypertrophied, and the valves much diseased; the walls of the auricles were thinned, and the cavities contracted to a very small size. The spleen was much enlarged, and easily broken down by the fingers. The other organs were normal.

FRIDAY, September 14, 1849.

Congestive Fever—Puerperal Convulsions—Precocious Development—Chloroform Internally and Externally.—Dr. Jenkins said he had seen some cases of congestive fever since the last

meeting of the Society, and mentioned the following case as illustrating the type and treatment pursued: A man about twenty-eight years of age had been seized with a chill the day before the Doctor saw him. He had been violently purged, and presented much the appearance of a man in the collapsed stage of cholera—surface cold; breathing oppressed; nasuea constant and distressing; pulse quick and thread-like, and much prostration. Mustard plasters were ordered for the extremities and epigastric region, friction was ordered to be kept up continually, and brandy and quinine were exhibited internally. Reaction came on and the patient recovered.

Dr. Barnes stated that he had been in attendance upon a very severe case of puerperal convulsions, and gave the following history of the case: The patient was a negress fifteen years of age, who had been in labor ten hours; the convulsions commenced an hour or two before Dr. Barnes saw her. She was lying in a stupor and breathing heavily when he saw her. The uterus was high in the abdomen, and the os uteri, at that time, could not be reached; pulse was quick and weak. Prescription, a weak brandy julep and a warm pediluvium. Soon after, the convulsions returned with violence, and chloroform was resorted to. It arrested the convulsions for a few moments, but they soon returned with increased violence. After the lapse of five or six hours, the stupor had increased, delirium had now set in, and the pulse was more full—she was bled, with but partial relief. Dr. Mordecai saw the patient at this time, and advised one-third of a grain of antimon. tart. every three hours, and leeches to each temple. The os uteri was now plainly felt to be dilated to about the size of a dollar. The convulsions were not at all arrested by the remedies, and the patient died at 4 o'clock, A. M., twenty-three hours after she had been first seen by Dr. Barnes; no pulsation of the fœtal heart could be heard for some hours previous to death.

Dr. Ketchum related the following instance of precocious development that he had met with in a family of negroes: The mother, Diana, was just thirteen years of age when her first child was born. This child, Tyra, was now twelve years and three months old, and had been menstruating eighteen months. She was three months advanced in pregnancy. Her breasts

are large and full, though otherwise she has the appearance of a young girl of eight or nine years of age. Her younger sister, Mary, is just nine years of age, and has been menstruating regularly since the spring of 1847. If Tyra carries her fœtus until term, her mother will become a *grand-mother* before she is twenty-six years of age.

Dr. Ketchum remarked that he had made three different applications of chloroform since the last meeting of the Society. The first was its administration by inhalation, in a violent case of hysterical convulsions, occurring in a young woman twenty-one years of age. The convulsions were suspended on several occasions, by the timely use of the remedy, and under its continued application they ceased entirely, and up to this time had not returned. The patient had suffered much from similar attacks before, and had a sister who died during a paroxysm of the same disease a few years since.

The second was its topical application in a very painful neuralgic affection of the face and one side of the scalp. The patient was entirely relieved by wetting a handkerchief with a few drachms of the article, and applying it along the painful course of the nerves.

The third was its use by inhalation, in a case of tedious and difficult labor. The subject was in labor with her first child. The water had been evacuated by the first pains, and the child was presenting by the breech. Under the circumstances, the labor promised to be a long and painful one. The chloroform was used, and the patient kept under its influence about ten hours. The regularity and efficiency of the pains were in no wise disturbed by its use, and the suffering and subsequent prostration was not at all in proportion to the difficulty of the labor.

Dr. Ross said that the only case of interest that had occurred to him since the Society last met, was one of congestion of the brain, occurring in a child. When first seen he was in a chill, which lasted twenty-four hours. A very irregular fever then came on—hands and feet very cold and the head very hot—pulse quick. The child was completely comatose. Warm bathing, leeches to the temples, and brisk cathartics were resorted to with good effect. Afterwards quinine was given and the child improved rapidly under its use.

SEPTEMBER, 27, 1849.

Convulsions in Children—Yellow Fever ending in Black Vomit—Drunkards throw up Black Vomit—Cholera—Chloroform in Convulsions—Experiments with this article by Majendie and Barnard, of Paris—Chloroform in Labor.—The meeting was called to order by the President, Dr. R. L. Fearn.

Dr. Ketchum read a paper on the subject of "Periodicity in Disease."

Dr. Miller reported a case of infantile convulsions, in which, after the failure of other remedies, he used chloroform with the most perfect success. In answer to an enquiry of the President, as to the prevailing type of the diseases in his practice, he remarked that intermittent and remittent fevers predominated over all others.

Dr. Hicklin said he had seen a well marked case of Yellow Fever. The history of it he gave as follows: The patient was a young man twenty-five years of age, recently arrived here from St. Louis; he had remained a few days in New Orleans. He was seized with the attack the day after his arrival here. From the first his disease presented all the characteristics of yellow fever. On the second day there was a distinct remission in the fever, and relief of the pains, &c. The Doctor gave him a dose of quinine, but another paroxysm of fever came on with some delirium. On the fourth day the skin was moist, the pulse regular, and the patient calm. In a few hours hemorrhages from the mouth, nose and bowels came on, attended by delirium and restlessness, and in a short time black vomit made its appearance, and the patient died on the fifth day. The corpse was yellow and ecchymosed in many places. He remarked that the majority of the cases of disease, which came under his notice, were of an intermittent type.

Dr. Nott said he had seen a case of disease in which the vomiting resembled very clearly the black vomit of yellow fever. The man was very intemperate in his habits; had been in the city five days, and had been sick all the time. He complained of a burning sensation at his stomach, and much nausea. The pain in his head and back was also very severe. The Dr. said he would not call the case one of yellow fever, because he thought that

the character of the fluid might be accounted for by the intemperate habits of the patient.

Dr. Ross said he had seen a case of cholera. The subject was a boy employed on one of the boats plying between New Orleans and this city. He had drank very freely of cold water, and in a short time afterwards was seized with violent cramps and the other symptoms of cholera.

When seen by Dr. Ross he was in a collapsed condition, with a shrivelled countenance, a cold, perspiring skin, cold tongue, and a very weak voice. His muscular strength, however, did not seem to be much impaired, as he would get up and walk about unassisted. Dr. Ross directed a warm bath—brandy and a mixture of ether, camphor and capsicum. No re-action ensued, until an hour before death, which occurred in 30 hours from the accession of the attack; no post mortem examination was held.

Dr. Ross stated that the prevailing types of disease in his practice were of a congestive and remittent character. Dr. Walkly observed that he had been called to see a child 14 months old, in convulsions. The spasms were confined principally to the right side. The gums were lanced, and the usual remedies in such cases resorted to, with but little apparent succes. He at length made use of chloroform, which, in a few moments, succeeded entirely to his satisfaction. The convulsions did not return.

Dr. Anderson remarked that he had seen a case confirmatory of the above. The child was 12 months old, and had been in the attack about 3 hours when he first saw it. The parents, under the direction of a physician, had made use of many remedies, but the child seemed to be in no degree benefited by them. He advised chloroform, and it was used with entire success. The administration of it was kept up for several hours on account of the tendency that the convulsions manifested to return. He thought that about ℥i. of the article had been used. Dr. Anderson stated to the society the result of some very interesting experiments that he had witnessed in Paris, under the direction of Magendie and Barnard, with chloroform and letheon. They found that the inhalation of these articles by the human subject might be continued until the countenance began to assume a livid hue, showing a tendency to a change of color in the arter-

ial blood, and that beyond this point it was dangerous to push the inhalation.

They experimented on many different animals, and a change in the hue of the schlerotic coat of the eye marked the point to which they could proceed with impunity. If the inhalation was suspended at this time, the animal revived, and the agent might be again used in a few moments; but if they continued the experiment after noting this change but a short time, fatal effects would follow. To conduct the experiment, a vein and an artery were each opened, and the blood allowed to flow in a very fine stream—after on uncertain period, a change in the color of the arterial blood was noticed, and simultaneous with this, the livid appearance of the schlerotic coat of the eye might be observed. The spinal marrow was also laid bare, and it was found that sensation in the nerves was lost from the periphery towards the centre; and when it returned, this phenomenon was reversed.

Dr. Ketchum gave the details of a case of Phthisis pulmonalis, in which cod liver oil combined with an infusion of Prunus Virginiana, had been used with much apparent benefit. The progress of the disease in the case seemed to be completely arrested; the expectoration had diminished very much in quantity—the dropsical effusions in the lower extremities had disappeared. The appetite and digestion were much improved, and the patient had regained much strength and some flesh. The disgusting taste and smell of the article had been destroyed in a great degree by the patient chewing, both before and after taking a dose of it, a small piece of orange peel.

Dr. Hicklin remarked that he had a patient who had been using it three weeks without deriving any advantage, so far.

Dr. Anderson observed that he had seen it extensively used in France, and that but few cases were benefited by it.

Dr. Fearn reported two interesting cases of labor, in which he had used chloroform with much benefit.

The 1st case, was that of a young woman 14 years of age, in labor with her first child. The labor had continued 48 hours, and the waters had been evacuated 18 hours. Her suffering seemed to be extreme, and she was much prostrated; on examination, an arm and the cord were found presenting. The os uteri was contracted firmly on the arm and in consequence, it was found much swollen and livid. The efforts to dilate the os uteri were ineffectual. The patient was freely bled and chloro-

form administered. Taking advantage of the relaxation produced by the nausea which followed the bleeding, the Dr. introduced his hand, turned the child and succeded in bringing down the feet; ergot was then administered, and in a short time the child was born alive. Dr. Fearn attributed much of the success in this case to the chloroform, and the prompt action of the ergot.

The 2d case was one in which the uterus seemed paralyzedby the distension produced by the unusually abundant quantity of water that it contained. The woman had been in labor three days and nights; it was her 3d child. When seen by the Dr. the expulsive pains had ceased, though she was excessively irritable and restless, and complained much of the pain she suffered from the contractions of the circular fibres. The os uteri was in such an irritable condition, that it was almost impossible to make an examination. Chloroform was administered, and by its use this condition of the system and uterus was calmed labor began again, and in a short time the child was born without further difficulty. No bad symptoms followed in either of these cases.

Dr. Ross made a few remarks on the subject of the appointment of Coroner in Mobile County. He thought it was important that the office should be in the hands of some medical men, and offered a motion to the effect, that a committee of two should be appointed to inquire into the subject, and present a report of the same at the next regular meeting of the Society. The motion was carried, and Drs. Ross and J. E. Nott appointed the committee.

MOBILE, Friday, Nov. 3d, 1849.

Reporter of Medical Facts—Delegates to the State Medical Association appointed—Opthalmia—Nux Vomica in Asthma—Rupture of Ligaments of knee joint.—The following resolutions were offered by Dr. Ketchum, and unanimously adopted:—

Resolved, 1*st*, That one member of this Society be elected, to serve for one year, as Reporter; whose duty it shall be to keep an accurate account of the prevailing diseases of each month, of all epidemics, their supposed cause and origin, their progress and duration, the peculiar circumstances and conditions of weather, &c., which would influence, or in any other man-

ner control them, their treatment, their mortality, &c.; and that he shall make a report of the same at the first meeting in each month; and, if the report be adopted, it shall be his duty to record the same in a book kept for that purpose.

Resolved, 2*d*, With the view of making the report as complete and reliable as possible, that each member of the Society be requested to furnish the reporter with all the information in his power, bearing on this subject.

Resolved, 3*d*, That an annual summary of the facts exhibited by these reports be prepared, to be read at the anniversary meeting of the Society, and, if the information contained therein be deemed of sufficient importance to warrant it, that it be furnished the New Orleans Medical Journal for publication. Dr. Anderson was elected Reporter.

The subject of sending delegates to the meeting of the State Medical Association, to be held at Montgomery, on the 2d Monday in December, was next brought forward. It was deemed very important that the Mobile Medical Society should be represented; Dr. W. H. Anderson was appointed delegate, and as many others were requested to attend the meeting as could conveniently do so.

Dr. M'Nally observed, that he had witnessed quite an epidemic of purulent opthalmia, among the inmates of the Catholic Orphan Asylum. He had found much relief, in several cases, from binding a light silk handkerchief over the eyes, so as to exclude the air at night. He had observed, that, during an attack of this disease, the children usually slept with their eyelids but partially closed, and that the atmosphere during this time affected the eye injuriously; and hence he resorted to the above plan.

Dr. M'Nally recommended, as a remedy of great value in chronic opthalmia, an ointment of ung. hydrarg. ʒ ss., kreosote from gtt. x. to gtt. xx., brushed over the conjunctiva once or twice during the day. He had first seen this remedy used in Havana, and had since frequently used it with great success.

Dr. Miller said he had seen a very severe case of Asthma of some 15 years standing. The patient had been subjected to many different plans of treatment, without having been permanently relieved by any of them. He gave him pills of nux

vomica, two grains each, three times a day, and the patient seemed to be entirely relieved by the remedy. The paroxysms of dyspnœa gradually became less and less frequent, until now, they had ceased entirely.

Dr. Fearn remarked, that he had seen two rare cases of injury; both of them rupture of the ligaments of the knee joint. The first a child. The injury was first noticed the day after its birth. Dr. Fearn thought that in this case it was probably not the result of injury, but an arrest of development. The second case was a man about 35 years of age; a teamster was found on the road with the ligaments of the patella and also the ligaments at the back of the knee joint ruptured. The treatment, in this case, was perfect rest and a generous diet, as there seemed a lack of sufficient action in the parts to repair the injury.

MOBILE, Friday, Nov. 21st, 1849.

Hepatic abscess discharging through the Lungs—Chloroform in Trismus nascentium—Imperforate Anus.—Dr. Hicklin related the particulars of a case that had fallen under his observation in the city hospital. A woman about 28 years old came into the wards complaining of severe cough, much emaciation, expectoration of much purulent matter, night sweats and hectic fever; the right lung was dull on percussion, and through its greater extent impervious to air. She was not benefited by any treatment, and died on the twenty-fifth day after her admission. A post mortem examination showed the right lung adherent to the walls of the thorax. On cutting into the substance of the liver, a large abscess was discovered opening into the lung, through a fistulous passage. The lung itself was a mere shell, and filled with pus; the bile was very thick, and of a dark green color. The patient had suffered three weeks from cough, before entering the hospital.

Dr. Walkly stated that he had made use of chloroform in three cases of trismus nascentium, to relieve the spasms, but without any good effect in either case. He could detect no displacement of the occipital bone, but the umbilicus in each case was red and inflamed.

Dr. Ketchum detailed two cases of imperforate anus that had fallen under his observation. The first case died before any attempt at relieving it had been made. In the second case, the

obstruction was a membranous formation just within the sphincter. The obstruction was complete, and the child was suffering from all the symptoms that such a condition of the parts would naturally produce. The operation for its relief was simply thrusting a lancet through the membrane, and making a sufficiently large opening. The puncture was followed immediately by the exit of a large quantity of dark green meconium, and much offensive gas. The relief to the child seemed to be almost instantaneous. Dr. Fearn remarked, that the mention of these cases brought to his mind two very instructive cases, of a like character, that had fallen under his care some years ago. The first was a case in which the intestine terminated at or about the promontory of the sacrum; following the direction pointed out by nature, the child was operated on the third day after its birth; a small quantity of meconium stained the point of the instrument; a small quantity of flaxseed tea was then thrown into the opening, but no portion of it returned; a catheter was then introduced about three inches, and a small teacupful of the tea was thrown up through this, and again there was none returned; another injection was used, with the same result; the child died. A post mortem examination was made, and it was found that the intestine had terminated just below the promontory of the sacrum; that there was no appearance of sphincter; that the space intervening between the points of the external orifice and the termination of the intestine was filled up by loose cellular tissue. The incision into the intestine was very slight; the catheter and the injections had passed under a fold of the peritoneum into the cavity of the abdomen; a small white, thread-like line was observed to mark the course that should have been taken by the rectum; this line led from the point where the external orifice should have been, to the point where the intestine terminated. The doctor said that the white line proved the truth of the observation, that when nature failed to do her whole duty, she usually left some trace behind of the efforts she had made.

A short time after this case, he was called to a child presenting the same appearance; he waited until vomiting commenced, so that the contents of the intestines might be forced down into the *cul de sac*, formed by the termination of the intestine. On the third day, he thought it best to operate. The child was then placed in a good light, and a careful examination made; no fluctuation could be detected, and no trace of a sphincter ani. The

white line observed in the other case, however, was discovered, and a conical incision was made, with this point as the centre. A small silver thimble, with polished sides, which had been made for the occasion, was then introduced into this incision; this answered the double purpose of compressing the bleeding vessels, and of making the way clear for the next incision; another cut was then made on the white point, and another thimble was then pressed in, and so on, until the operation was complete, always having for a guide the mark left by nature, the small white line. After the operation, a tube was introduced, which was worn constantly for twelve months; it was, at the expiration of that time, taken out for a short time, but, on account of the great tendency that the orifice showed to close up, it was found necessary to introduce the tube again. Repeated efforts were, in after years, made to dilate the opening, as there was frequently much difficulty in evacuating the bowels. Eventually, however, nearly all difficulty ceased, and the subject of these remarks is now a strong healthy youth of sixteen years of age, active and vigorous in both body and mind.

MOBILE, Friday, Jan. 4th, 1850.

Erectile tumors in the Female Urethra—Epulis—Operation to relieve Deformity—Nyctalopia—Injuries affecting the Head.—Dr. Walkly remarked that he had, during his practice, seen two or three cases of erectile tumors occupying the urethras of females, producing a very distressing train of symptoms, such as general derangement of the nervous system; profuse leucorrhœa, partial paralysis of the lower extremities, pain in the coccyx, aggravated by assuming the sitting posture, spasms of the urethra whilst urinating, and so severe, at times, as to produce almost complete retention of urine.

These tumors he found about the size of a pin's head, and of a bright crimson color. He removed them with the knife, or a pair of scissors, and freely cauterized the spot afterwards. After their removal, the unpleasant symptoms disappeared.

Dr. Fearn said he had once seen a tumor of the urethra that bled very freely, and produced, frequently, retention of urine. He finally cured it by applying to it constantly, the tinct. ferrimur.

Dr. Ross thought that there was some resemblance between these tumors and those we see on the gums, and known as epulis.

He had seen kreosote used with success for their removal, as in the following prescription: kreosote, ʒi., spts. vin. rect., ℥ss; aqua font., ℥vi., M. A tablespoonful to be taken three or four times a day.

Dr. Anderson detailed the following particulars of an operation that he had recently performed: A man applied to him, who, two years ago, had received an injury of the middle finger, by which the first phalanx was turned back at right angles to its true position, and was immovably fixed in that direction. The tendons of the flexors were ruptured, and consequently the deformity was very great and very inconvenient; to relieve this the doctor made an incision on each side of the bone, leaving the artery external to the incision. He then passed a cooper's needle armed with a ligature, to which was attached a small chain saw, around the bone, and now having the saw around the bone and clear of the flesh and blood vessels, he cut through the joint, and brought the finger straight. The flexor tendons being severed it was, of course, impossible to give him a joint.

Dr. Ketchum stated that a man had applied to him for relief from the following symptoms: Every evening, just at sunset, he would become blind, and continue so until the following morning, when he would be able to see as well as ever; during the night he could not see the brightest light. He stated that he was working on the Mobile and Ohio Rail Road, and that these symptoms had returned with the greatest regularity for four successive evenings; otherwise he felt perfectly well. He suffered no pain, and there was no appearance of anything unusual about his eyes. His tongue was slightly furred. A purgative of blue mass and rhubarb was given in the evening, and on the following morning fifteen grains of quinine was administered. There was no return of the affection from this time.

Dr. Fearn remarked that he wanted to call the attention of the Society to a class of cases which he thought should be watched very closely by the surgeon—namely, patients who had received violent blows or contusions about the head. He referred to two cases which had fallen under his care, where, after all the symptoms of injury had disappeared, and several days had elapsed after the receipt of the injury, when suddenly they were seized with convulsions, followed in a short time by death. He thought that, in such cases, a watchful prudence should be exercised for several weeks after the receipt of such injuries.

REPORTS FROM ALABAMA.

AETICLE IV.—ALABAMA STATE MEDICAL ASSOCIATION.

[It is with pride and great pleasure that we refer to the transactions of this admirable Association. It holds annual sessions, and seems to command much of the best medical talent of the State in its support. The anniversary address delivered at its last meeting, by Dr. Baldwin of Montgomery, would be creditable to any physician in the Union, and may be favorably compared with the Introductories of any of the Medical Colleges. It has been published in a beautiful pamphlet, and we hope will be extensively circulated.

The Transactions of this Society consist of reports on Topography, Meteorology and prevalent diseases, and correspond so well with the plan of our work, that we shall gladly avail ourselves of them. They have been published in the New Orleans and Augusta Medical Journals, from which we shall select such as we think are most valuable. We trust that all the other Southern States will imitate the noble example set by Alabama, and maintain their Medical Societies with spirit and energy. We have tendered to all of them the use of our pages, but whether they accept or not, if they will work on and publish, we will have access to their labors. There can be no doubt that they will exert a powerful influence on the entire profession, and we heartily wish them success. We can only make room for the following report in this volume, though others of equal importance have been published in the Medical Journals.]

REPORT—*On the prevailing diseases of a portion of Dallas County. Read before the Alabama State Medical Association, at its sitting in Wetumpka, on the 7th and 8th of March,* 1849. By F. A. BATES, M. D., of Dallas Co., Ala.*

[Published by order of the Association.]

In accordance with the duty assigned me by the Association, the following tabular statement of the diseases of my locality, with a few incidental remarks, is most respectfully submitted:

As a preliminary, allow me to say a few words regarding the topography of the country. The section in which the diseases subjoined were treated, lies in the north-west corner of Dallas County, including a small slip of the southern portion of Perry, and resembles, in figure, an irregular parallelogram, embracing a scope of country about eleven miles in extent from north to south, and about fourteen from east to west, and including a population of nearly two thousand, nine-tenths of which are slaves.

The eastern limit is Cahawba river; the western is a large stream called Mud-creek; Bogue-Chitto runs a southerly course between the two, and joins the creek near the south-west corner of this section, receiving in its course numerous small tributaries. The surface of the country is gently undulating, and traversed with sloughs that convey the water to the larger streams, but during the summer they are generally dry.

The soil is the rich alluvion of the cane-brake, varied somewhat in fertility and color, but generally of a brown or deep chocolate color, while portions adjacent to the sloughs are nearly black. Some of the most elevated portions are destitute of timber, and only covered with grass, herbs and shrubs, having a light colored soil, composed of more than 50 per cent. of lime; these are termed "bald prairies." The growth of timber is the same as that of the greater portion of the cane-brake, consisting of oak, ash, hickory, gum, &c. During the winter or rainy season, the sloughs and streams are abundantly supplied with water, which inundates extensive swamps that lie on either side of them; but during the summer they are nearly dry, while the little remaining water stands in holes. The great amount of water used by man and beast is afforded by artesian wells, and is a mixture of freestone, lime, chalybeate,

* From the New Orleans Medical and Surgical Journal, September, 1849.

and sometimes of sulphur water. This section consists of large bodies of cleared land, with extensive plantations, many of which have been opened a long time, but are annually increasing in size.

The subjoined list of cases occurred in a practice of five and a half years, and are noted down as well-marked cases of the disease.* Many others, that required temporary treatment only, were seen but once, and consequently were not considered as worthy of place in the list of those that demanded several visits and a systematic course of treatment.

In referring to my case-book, I find recorded 1013 cases of disease, of which number there died 67.

Bilious Remittent Fever.

From unavoidable circumstances, I shall be compelled to limit my remarks to a few of those diseases that come under the observation of all physicians, leaving many interesting individual cases for some future time.

As bilious remittent fever stands prominent among the diseases of this climate, I will make a few remarks pertaining to my course of treatment.

Since the introduction of quinine in increased doses, into the treatment of fever, has wrought an entire change in the plan formerly adopted by practitioners, every argument that can be brought to bear upon the utility of its application should be advanced in its support. I suggest nothing new, but only confirm, by a repetition of what others have done, the correctness, simplicity and efficiency of their treatment.

I pursue a mild antiphlogistic plan, administer hot mustard pediluvia, cold applications to the head when there is excitement of the brain, sponge the body with cold water, and allow cool mucilaginous drinks, with small portions of carb. soda or potash, dissolved in them.

The alkali has a tendency to relieve the thirst much more than acidulated drinks, and from the amount of carbonic acid contained in it, has, no doubt, a favorable effect in correcting morbid secretions.

* We regret that we cannot make room for the catalogue of diseases given by Dr. Bates.---*Ed. S. M. Reports.*

After producing an open state of the bowels by a mild cathartic, which consists entirely or in part of mercurials, a gentle diaphoretic, or if there is an irritable condition of the stomach, the effervescing draught is administered until there is a cessation or remission of the febrile symptoms. So soon as this has taken place, sulph. quinine, in doses of from 3 to 5 grs., together with a little morphia or Dover's powder, if not contra-indicated, is given every two hours. If, after a few doses have been administered, the fever rises, this combination is omitted, and a resort to those means that will subdue the paroxysm, as above stated, is relied on, until a second remission occurs, which is generally longer than the first. Should there be some little excitement, which creates a doubt with regard to the early employment of quinine, I have invariably found a small portion of ipecac. and morphia combined with it, a most valuable adjunct, never failing to produce softness of the pulse, quiet and gentle diaphoresis. The bowels are kept open daily with mild laxatives, but active purgation is carefully guarded against. By pursuing this course, as a general plan, subject to modification of course, in complicated cases, I have rarely ever failed, in the course of four or five days, in subduing very severe and threatening cases.

General blood-letting is rarely ever practiced, but in some cases complicated with engorgement of internal organs, local depletion is substituted, and has been the means of relieving the urgent symptoms that demanded its use, and of hastening the convalescence of the patient.

Typhoid Fever.

Of the 16 cases of typhoid fever that came under my notice, 6 were whites and 10 were blacks; all adults. Of the former, three proved fatal; of the latter, five. There were two cases occurring among the whites, and the same number among the slaves, that I term malignant typhoid, in contra-distinction to the others, from the severity of the symptoms and the rapidity of their course. The symptoms were different from those we usually see in typhoid fever, and in some respects assimilated those of malignant bilious fever. It is a difficult matter, I apprehend, to explain the combination of appearances, unless we

suppose that the causes which produce remittent fever, modified considerably the idiosyncrasy of the individual in whom was developed the typhoid type.

The first case of the malignant typhoid type that came under my notice, was in October, 1847. The individual was a laboring man, of good habits and ardent temperament, æt. 35. For a few days previous to his confinement, he felt languid, with a disposition to refrain from labor, but did not until the day before he took his bed. There was a slight rigor, followed by sensations of heat and cold alternately, on the first day of his confinement, but he took only a mild laxative.

On the second day I saw him for the first time: he was delirious and rather restless, pulse 80, respiration 24, skin slightly above the natural temperature, dry, and generally of a dusky color, showing great inactivity of the capillary circulation; tongue rather dry, coated brown, and rather large, with numerous furrows running in every direction over the surface; his eyes were slightly injected, and there was a little dilatation of the pupils; head rather hot, but no particular excitement of the carotids; the abdomen was slightly distended, and there was little pain on pressure. I directed a mercurial cathartic, which opened the bowels freely; the stools were quite natural, and gave evidence of sufficient biliary secretion. I cupped him freely to the nucha, applied sinapisms between the shoulders and to the extremities, alternating with foot-baths every three hours. In addition, I gave internally half an ounce of acet. ammon. with a little spts. nitre every two hours, and carb. soda 20 grs., dissolved in a tumbler of thin mucilage, when he wished to drink.

On the third day there was a slight change; he had had an exacerbation of fever during the night, but it had subsided, and the temperature was about natural; the tongue was drier, delirium about the same, pulse and respiration not changed. The duskiness of the skin was greater, if anything, and there was more difficulty in engaging his attention and drawing answers to questions, than on the previous day; bowels open, stools natural; still slight tenderness over the stomach and bowels on pressure; gargouillement; eyes still injected; features contracted, with great duskiness of the cheeks, considerable ringing of

the ears; much thirst. I directed four blisters to be applied to the extremities, and one to the epigast. and abdomen, until those of the extremities produced their full rubefacient effect; while that on the epigast. was to remain to vesication, and then to be dressed with a cerate of quinine. I administered, internally, 5 grs. blue-pill, and directed 14 grs. carb. ammon. and 5 grs. quinine to be given every two hours, and brandy and water frequently.

On the fourth day he was worse; pulse 93, and respiration a little accelerated; tongue dry and parched; skin cooler than natural; eyes brighter than common; brain more active; more restless; slight subsultus tendinum; had slept none for thirty hours; bowels open once; stools still natural; he had a slight exacerbation of fever during the night, which subsided without perspiration. I applied the blisters again to the extremities, continued the carb. ammon. and quinine, though the latter was increased to 10 gr. doses every three hours; kept up the brandy and water, and gave an enema of spts. terebinth.

Notwithstanding the active treatment pursued, the energy of the system became greatly oppressed, the pulse became small and frequent, the respiration laborious, the skin cool and inelastic, and he sunk rapidly for four hours, became almost pulseless, and was considered at one time to be dying.

As a dernier resort, a blister of concentrated aq. ammon. was applied to the nucha, and opium and camph. were added to the carb. ammon., with apparently the best results.

The pulse in a short time became stronger, but was fluctuating—now quite appreciable, and then indistinct; but a persistence in this course gave some hope of his passing the crisis, which he did, and on the fifth day became so much better, that hopes were entertained of his recovery.

On the night of the fourth day, there was no exacerbation of fever; and on the morning of the fifth the tongue became more moist, and the delirium left. From this time the amendment was slow but gradual for two weeks, terminating in recovery.

The next three cases were still more violent than the preceding one. Two of them had premonitory symptoms of fever for nearly a week, but were not detained from their daily duties. On the first day of their confinement, the attack was ushered in with a chill of no great severity, followed by considerable fever,

which was distinguished by a slight remission, followed in 12 hours by a second exacerbation, which prostrated the energy of the system entirely. In these two cases, from the moment the exacerbation was the highest, there was a gradual decline of the powers of life, until complete prostration ensued, and death followed in a few hours.

In one of these cases, the tongue was smooth, clean and dry; slight tenderness on pressure over the stomach and bowels, particularly on the right side.

In the other, the tongue was a little more furred than natural; for the first few hours moist, but after a while became dry; the abdomen was fuller than common, and the patient shrunk when firm pressure was made. In both, the skin was most of the time a little above the natural temperature, dry, and of a dusky hue; respiration from 25 to 30; pulse from 80 to 95; eyes injected; pupils sometimes a little dilated, but at times there was sensibility to the impression of light. There was delirium, "tinnitus aurium," subsultus tendinum, and restlessness; bowels open, with natural stools; gargouillement, or that gurgling of the contents of the bowels, which is considered by some authors as ever attendant upon cases of typhoid fever, was present, as in the first case.

The indications of treatment were, in my opinion, to equalize the circulation, allay the local uneasiness, and pursue a supporting treatment. The first was done by the application of sinapisms and blisters to the extremities; the second by cupping and blistering; the third by the administration of quinine, camph., opium and brandy, in doses proportioned to the seeming wants of the case.

Notwithstanding the treatment, without any appearance of relief, they grew worse, and died in 72 hours after my first visit.

The fourth case was quite similar to the two last, but was not so severe. The same treatment was relied on, and a happy result crowned my efforts, though the convalescence was slow.

These cases were remarkable for their severity, and the little apparent change in the functions of the secretory organs and the circulation. In some respects they favored aggravated cases of bilious remittent fever; in others they bore the habitude of typhus. During the last few hours, the countenance presented that peculiar, pinched and contracted state of the features which we ever find in the latter disease.

In the other cases of typhoid fever that came under my attention, there were seen distinctly marked the peculiarities of the disease as described by authors. The individuals, without an exception, exhibited the following symptoms, though not all to the same degree: a shrivelled, inelastic state of the skin, of a dusky color, rarely ever moist and not much above the natural temperature. Respiration almost natural, sometimes a little accelerated; pulse from 78 to 90 in the first stage of the disease, and rarely ever reaching 100, unless in the last stage of the affection. Frequently in the after part of the day, the volume, quickness and frequency of it would be increased. The tongue generally slightly furred at first, but, as the disease progressed, became browner, more furred and dry. The eyes were injected, with redness of the lids, and possessed at times unusual brilliancy of the cornea. The pupils, for the first few days, were generally of the natural size, but frequently they became contracted, and there was extreme susceptibility to the impressions of light. The intellect, though clouded, as was evinced by incoherency of thought and expression, was at times quite clear, more particularly in the morning. When delirium supervened, it generally appeared first at night, and progressed daily. In most cases but little pain was complained of, though at times uneasiness was manifested when pressure was made over the ileo cœcal region. In all these cases gargouillement was present to a greater or less extent. Tinnitus aurium was one of the most annoying symptoms to the patient, and he would complain of inability to sleep on account of it. In two instances deafness occurred in the last stage.

There was but little difficulty in maintaining a laxative condition of the bowels, and the stools, in many instances, were, to all appearances, natural. In others, they were quite natural for a few days, and would then change to a dark brown or almost black color. In one case, bloody stools, with mucus, appeared, though not unfrequently, and in a short time, they became quite natural again.

The urine, in all the above cases, was rather scanty and heightened in color, sometimes rather turbid, generally depositing on cooling, lithic acid. The treatment pursued in these cases, in the main, was mild and expectant. Where much fixed pain was present, cups were applied, and, if not relieved, blisters followed. Sinapsisms frequently repeated produced the happiest effects.

Laxatives were occasionally used, to free the bowels from accumulations. The prostrated condition of the patients forbade anything like active treatment, and I relied wholly upon the resources of the system for a restoration of its powers, contenting myself with watching the mode or tendency to death, as Cullen expresses it, and counteracting its direction by a mild supporting treatment.

*Congestive Fever.**

The term congestive fever has become so common through the Southern States, that I am inclined to believe there are many who think it a disease as distinct from bilious remittent and intermittent as is continued fever, and that there is no peculiar relation existing between it and the former named types. The term congestive or congestion is a relative, and, when applied to fevers, should be qualified. We call the cold stage of intermittents congestive, the preceding rigor of remittent fever, congestive, that determination to certain organs during the hot stage, congestive. Now, certainly, the term cannot be applicable in all these cases without qualification, and when we hear of so many cases of congestive fever occurring in a particular locality, we are at a loss to understand whether they were cases of active or passive congestion—of real adynamia, or such as accompany febrile action, with an acute engorgement of some organ. Although I use the term myself, from custom, I believe it inappropriate—in fact, a misnomer, because, in genuine cases of the disease under consideration, I have rarely ever seen reaction brought about to such a degree as to produce that condition we find in an exalted state of the system, and which we call fever. What, then, is this disease? Is it a fever *sui generis*, or is it a condition that may accidentally obtain in other diseases? My own opinion is, and it was expressed in an essay on this subject more than three years ago, that it is a condition that may easily obtain in cases of remittent and intermittent fever; that it is essentially adynamia and nothing else. If an individual receive a severe injury, or is poisoned by any of the narcotics or antimony, we find many of the same symptoms, only perhaps they do not con-

* We concur in this author's views of *congestive fever*, and the term "*congestive*." — *Ed. S. Med. Rep.*

tinue so long, or are not so intense as in what is termed congestive fever; reaction comes on sooner, and the individual is relieved of the symptoms of adynamia, while those of hyperdynamia take their place. In what is termed congestive fever, the same symptoms appear, only aggravated, while many others are added from greater lesions of innervation, and the system, from its depressed condition, does not allow complete reaction to take place, unless assisted by therapeutic agents. We find the patient in these cases restless, frequently turning from side to side; uncovers himself; complains of great heat; has intense thirst, demands water often, declares, in most expressive language, he is burning up. Upon close examination, we find the skin cool, pale, and perhaps covered with a clammy exhalation, and shrivelled like the hands of a washerwoman. On the back and sides, where pressure is made, a livid or motley aspect presents itself. The extremities, ears and nose are icy cold. The eyes are red, and the countenance betrays the greatest anxiety. The The respiration is more frequent than ordinary—sometimes slower, but laborious; there are frequent sighings, with expirations like one out of breath. The pulse is small, and more frequent than natural, and in the most violent cases is imperceptible at the wrist. The heart beats tumultuously, as if encumbered with a load. The tongue is often furred white or yellowish, frequently large and flabby, sometimes there is great fulness of the epigastrium, and no relief is obtained until the individual has vomited freely. Diarrhea is of frequent occurrence, and, after two or three dejections, the stools are watery and filled with flocculi. The intellect is sometimes clear to the last. In this array of symptoms we not only find those that arise from severe mechanical injuries, but many more added. In the one case the part injured has transmitted the impression along the afferent nerves to the cerebro-spinal axis only to a certain degree, but in proportion to the susceptibility of the individual and the severity of the shock do the symptoms of adynamia prevail. The same with regard to poisons occur, and their peculiar tendencies to certain organs produce the symptoms peculiar to their nature; thus, all the narcotics manifest their action upon the brain primarily, though their secondary actions are not alike; strychnia excites the muscular system; antimony produces intense peristaltic action of the stomach and bowels, with cramps and exhaustion, and so with many other substances that have

peculiar action on the animal economy. In the other case, miasm, or whatever the morbific cause is that produces this adynamic condition, enters the blood, and in its circulation permeates every molecule of matter, and thereby produces a most tremendous depressing influence on the cerebro-spinal axis and the whole nervous system.

The heart, though not so easily affected in its functions, suffers adynamia to a certain extent.

Is it at all surprising that a substance so highly organized as nervous matter should suffer by such a change of the healthy blood into a vitiated fluid, or when changed, that the most alarming symptoms should ensue? This change in the crebro-spinal axis is a *sine qua non* to the production of adynamia, and it matters not how it is done, whether by mechanical injuries, poisons, mental emotions or miasm. It may even occur in mild cases of fever, which have been badly treated by persevering in the use of those agents that have a pernicious and depressing effect. If it were a peculiar disease, and not a condition, would we not find a tendency to seat itself in some organ or organs? Would we not discover some symptoms that might be considered pathognomonic? Do we discover anything in *post mortem* examinations that leads us to suppose that any particular organ suffers? We do not. But, considering it mere adynamia, we find everything consistent with that view of it, viz.: watery effusions into the cavities, to a certain extent, and the whole venous system prodigiously engorged, while the little blood that is left in the capillaries is very dark and thick. We find, too, certain organs, perhaps distended with blood and somewhat affected: sometimes one and sometimes another, just as this or that organ had a tendency to disease at the time this condition obtained.

The collapse of Cholera, I presume, resembles that condition which we denominate congestive fever more than any other; though even in this disease there is not always seen the same prominent symptoms in every case, still there is the same restless expression of face, pallor of skin, with its shrivelled appearance, and icy coldness and moist surface. There is the same difficulty of respiration, pulselessness, nausea, vomiting, copious watery dejections, and many other symptoms not necessary to mention, but similar to those named in congestive fever. This collapsed state of cholera is acknowledged by authors, I believe, to be an adynamic condition, into which the patient is plunged by the over-

whelming and depressing nature of the causes that produce the disease. The *post mortem* examinations in cholera do not reveal one fact that can satisfy the diligent enquirer who wishes to determine what organs, or if any, primarily suffer. There is seen great venous congestion, as before, with sometimes one and another organ affected according to its previous condition, precisely as we found it in congestive fever.

From the foregoing remarks, may we not conclude that congestive fever, as it is termed, is not a disease *sui generis*, but an adynamic condition that may obtain in diseases of miasmatic origin, varying in gravity according to the intensity of the causes in operation and the idiosyncracy of the individual attacked.

The treatment adopted by myself has been of the most active kind: quinine and stimulants, with camph., opium and aromatics are administered internally; while sinapisms, the hot air bath, dry frictions, and blisters to produce their full rubefacient effect, are applied to the extremities, spine and epigast. The patients bear quinine in large doses admirably, and I have frequently given 100 grains in a few hours without any other complaint than a little ringing in the ears. After reaction is in a measure effected, calomel in small doses, with opium, is given to correct the secretions, if necessary, while the quinine is continued to prevent a recurrence of the collapse. Perfect rest is enjoined the whole time.

Scarlatina.

During my practice in this state, there has been only one epidemic of Scarlatina in my neighborhood, and that was in the winter of 1843—4. In its extent it embraced about 80 cases, including children and adults, though the disease was confined principally to small children.

Of this number only 32 are recorded as regularly treated cases, owing to the mildness of the type. The heads of families acquired general directions, and assumed the treatment themselves, which consisted generally of a laxative, absolute rest, mucilagious drinks, and abstemious diet. There were exceptions to this uniform mild character, of course, and they are comprised in the cases recorded. For some time previous to its appearance the weather had been warm, and much rain had fallen, so that the atmosphere was humid and oppressive.

In the family in which it made its appearance, there had been no opportunity, for weeks previous to its occurrence, for receiving the contagion from others.

How it was communicated, or whether it arose spontaneously, is a mystery. Its attacks were very severe and malignant, for out of seven cases that occurred in the first family, two were of the congestive form, three anginose and two simple. The two cases of the congestive variety died, one in 24, the other in 50 hours from the time they were attacked.

In these cases, the eruption appeared only for a short time, and was of a pale, livid hue; it then receded, the patients becoming comatose immediately. Succeeding this, followed an alarming diarrhea and exhaustion; skin cool, pulse from 130 to 150, small and thready. Every effort was made to arrest this condition, but without avail. The hot air bath, frictions, enemata of tr. opii, sinapisms, calomel and opium all failed.

In the anginose variety, a mild anti-phlogistic treatment was pursued, with the happiest results. A mild laxative, and a soothing diaphoretic, were generally sufficient; sometimes, sponging with cold water was resorted to, producing a charming sedative effect. The throat of the individual was carefully examined, and if greatly inflamed, the tonsils were scarified with a common gum lancet, and then touched with a camel's hair brush and a solution of nit. silver, 10 grains per ounce, three times daily, until the soreness had in a measure disappeared. In some instances, the solution was gradually increased in strength from 22 to 25 grains. In not a solitary instance, where this course was pursued, was there ulceration or chronic engorgement, or enlargement of the tonsils, after the subsidence of the disease.

The relief afforded was so great and sudden, that I have been frequently desired by children to apply it oftener, on account of its gratifying results. The utility of this local treatment was put fairly to the test, in some cases, where no other applications were made than gargles and stimulating liniments externally, as was formerly the practice.

In these latter cases, the individuals not only suffered during the accute stage, but for weeks after they were annoyed from the engorgement and size of the tonsils.

REPORTS FROM GEORGIA.

ARTICLE I.—General report on the topography, climate and diseases of Middle Georgia. By. E. M. Pendleton, M. D., of Sparta.

That region of country properly known as *Middle Georgia*, and to which this paper relates, is bounded on the south by an isothermal line, running diagonally through the State, about 30° south of west from Augusta to Columbus, varying but little in a direct route through Milledgeville and Macon. The northern line may be considered as running parallel with this from Elbert County on the Savannah River, through Walton, to Heard County on the Chattahouchee. This forms the true isothermal line between Middle and Upper Georgia—the one being suited to the production of cotton, the other almost exclusively restricted to grain.

A latitudinal line running west from a point on the Savannah, would strike nearly a degree higher on the western boundary of the State; but the southern termination of the Alleghany Mountains assumes this diagonal line in Upper Georgia, and I have no doubt impresses itself on all the region below, even to the Atlantic—hence Augusta, in the east, is about as warm as Columbus in the west. This isotheral line runs directly parallel with the shore of the ocean, which seems to be conformed to the general geological aspects of the country. Thus, we perceive a granite ridge extending along the abovementioned line between Lower and Middle Georgia, over which all the waters of the State and the adjoining States, pour themselves in shoals or cataracts, and thence glide on by a gradual and easy descent to the ocean. The Savannah, at Augusta, the Oconee at Milledgeville, the Oakmulgee at Macon, and the Chattahouchee at Columbus, all have impassi-

ble reefs, constituting these cities the heads of navigation. The same line crosses Hancock County at the shoals of the Ogeechee, and by Garnett's Mills on Buffalo Creek; and I doubt not every tributary of all these rivers presents the same shoaly appearance in running over this granite ledge, which separates the Plutonic and Metamorphic regions of Georgia from the alluvial or tertiary. No granite is found below this line to the ocean, few rocks of any kind, and no shoals of water; all is a vast pine forest, with a grey, silicious soil, abounding in tertiary fossils, mostly Eocene and Pliocene.

Following the line of this Plutonic ridge, which is about fifteen miles in width, we find numerous deposits of Kaolin, of a beautiful, white variety, which will some day be brought into requisition for the manufacture of porcelain ware. This is, doubtless a decomposition of Serpentine or Felspathic rocks, which, not being able to stand the ravages of time like the everlasting granite, have dissolved to form another mineral of more value to man. In some places, as in Richmond County, these deposits form high cliffs, marking distinctly the ancient shore of the Eocene Sea, which once swept solitarily over the vast plain below.

Above this ridge there seems to have been an ancient valley, now filled with metamorphic rocks, through which the rivers glide with a much more gradual descent than they do higher up the country, where another and another granite ridge rises successively, on one of which rests, in beautiful and majestic proportions, one of the wonders of the New World, the *Stone Mountain of De Kalb.* Beyond this ridge the culture of cotton ceases in Georgia, except in small patches for domestic use, and perhaps more extensively in the vallies of the Coosa, on the Western borders of the State.

The native soil of Middle Georgia is a rich, argillacious loam, resting on a firm clay foundation. But the face of the country being hilly, and in some places semi-mountainous, much of this good soil has long since been washed into the vallies beneath, under the wretched system of agriculture at first adopted in this country. In some of the richer counties, nearly all the lands have been cut down and appropriated to tillage, a large maximum of which has been worn out, leaving

a desolate picture for the traveller to behold. Decaying tenements, red, old hills stripped of their native growth and virgin soil, and washed into deep gullies, with here and there patches of Bermuda grass, and stunted pine shrubs struggling for a scanty subsistence on what was once one of the richest soils in America.

The water courses have received the same tincture of the hills, especially after heavy rains, holding in solution a large proportion of alumina and the red oxide of iron, and presenting a muddy and forbidding aspect to one accustomed to the clear, pellucid streams of many portions of our country, especially the pine regions. There are no lakes and but few lagoons or native ponds in this region of Georgia. Art, however has not failed to make up the deficiency in this respect, by improving many of the thousands of mill seats on the numerous streams that water this favored region, thus forming artificial ponds enough to produce a good crop of autumnal fevers for the anxious sons of Esculapius to reap an annual harvest from. These, however, when decidedly pernicious, have in some instances been abolished by law, to the no small comfort and health of the inhabitants within reach of their deadly borders. Agriculture also has come to the aid of suffering humanity, of late years. Many creeks and marshy lands are being drained for purposes of cultivation, which adds no little to the health and wealth of the country. The improved method of hill-side ditching also is helping much to protect the soil from washing into the bottoms, and at once enrich and beautify the country.

The native growth of this country is oak and hickory interspersed with the short leaf pine, poplar, gum, &c., all indicating a good soil. It is a little singular that when the lands are exhausted and turned out to rest, they invariably spring up with the long leaf pine. It is accounted for on the chemical principle of rotation in crops. The first growth had exhausted all the richer elements in conjunction with the cultivation, and now no forest tree but the pine could find sufficient nourishment in the soil to cause it to spring up and become a tree. Partly from the fact that it does not require so many of the salts, but mainly because it sends its root deep in the earth,

and brings them up whence they had filtered away from the surface for ages. But this is a digression.

It is necessary for me to say a word in regard to the population. They are strictly an agricultural people, inhabiting what is properly a rural district, and are made up of two distinct classes, the white and the black. Formerly, when the country was in its pristine strength and glory, they averaged, probably, some twenty inhabitants to the square mile. Now it is reduced to about sixteen, and in some of the older counties it has been even lower than this, but they have in the last ten years been showing a gradual increase. The proportion of whites to blacks is considerably in favor of the latter, especially in the lower belt of counties, where cotton is a more lucrative article of produce.

The little we have to say about climate will be better presented in an inferential way from such meteorological tables as we have in our possession. In the absence of any such tables taken at this place, (Sparta,) I offer one by Prof. P. F. Eve of Augusta, and another by Prof. McKoy of Athens, the former being on the southern and the latter on the northern boundary of what we have designated as middle Georgia. I have had, necessarily, to condense these tables so as to show the mean temperature of each month, the mean range of temperature, the mean height of barometer, and monthly fall of rain.

The first table I present will be exclusively thermometrical, and relates both to Athens and Augusta. It may be proper to premise that Athens is situated 33° 58′. N. latitude and 5° 34′ W. longitude, with an elevation above tide water of 782 feet. Augusta is situated 33° 27′ N. latitude and 4° 32′ W. longitude. Altitude above tide, 152 feet.

THERMOMETRICAL TABLE.

Months.	AUGUSTA.										ATHENS.				
	Mean monthly tempera're.					Mean monthly range.					Mean monthly tempera're.				
	1845	1846	1847	1848	Total mean	1845	1846	1847	1848	Total range	1845	1846	1847	1848	Total mean
Jan...	45.4	46.1	46.3	50.0	46.9	24.6	18.5	11.3	18.8	18.3	46.	44.	43.	48.	45.2
Feb..	49.8	46.2	51.0	50.3	49.2	18.5	16.5	17.5	12.7	16.3	48.	45.	49.	50.	48.0
Mar..	55.8	59.6	51.7	56.9	56.0	19.2	17.0	17.5	17.6	17.8	54.	55.	51.	56.	54.0
April.	68.3	59.5	64.5	60.9	63.3	25.6	11.3	21.0	15.7	18.4	67.	62.	65.	62.	64.0
May.	69.6	70.0	65.5	70.3	68.8	20.8	18.0	15.5	16.4	17.6	67.	71.	68.	71.	69.2
June.	78.2	72.7	75.0	76.7	75.6	19.9	18.0	15.2	12.5	16.4	78.	73.	74.	75.	75.0
July..	81.5	76.8	74.1	77.6	77.5	19.1	14.5	12.0	14.6	15.0	82.	77.	74.	77.	77.5
Aug..	77.9	77.7	73.9	76.1	76.4	16.9	14.4	12.2	14.8	14.5	78.	79.	74.	76.	76.7
Sept.	72.7	75.2	70.9	67.4	69.0	18.3	14.6	15.2	20.1	17.5	74.	74.	72.	70.	72.2
Oct...	59.5	62.0	60.9	62.3	61.1	17.0	22.0	18.9	17.3	18.8	38.	59.	61.	61.	59.7
Nov ..	50.7	55.3	53.7	47.3	53.0	21.6	22.9	18.6	16.7	18.7	48.	55.	56.	46.	51.2
Dec ..	39.2	51.5	48.0	59.3	49.5	13.1	20.5	16.0	6.6	15.3	49.	55.	45.	55.	51.0
Ye'ly mean.	62.3	62.7	61.7	62.9	62.4	19.5	17.1	15.9	15.3	17.0	61.4	62.0	61.1	62.4	62.4

It will be perceived from this table that our climate is far rom being a changeable one; at least in comparison with more northerly latitudes: although a contrary opinion has frequently been expressed by northern men sojourning among us. A reference to meteorological tables will conclusively show that the nearer we approach the equator the more equable the climate, and vice versa. I regret not having the mean monthly range at Athens as it would throw considerable light on this subject. But there is one remarkable fact elicited by this table, which speaks volumes in favor of a southern climate, viz., that Augusta, the southmost city, has cooler summers and warmer winters than Athens. Thus the six warm months for the four years average 72° 6′ for Athens and only 71° 7′ for Augusta the six cold months, 52° 3′ for the former and 52° 6′ for the latter; making the average yearly temperature for the two places exactly the same, 62° 4′.

The table indicates January to be the coldest and July the warmest month; while October is the most changeable and August the least so. By the way, I doubt not future investigations will show, that atmospheric vicissitudes have much to do

with the propagation of every class of disease. By comparing the above table with the one of diseases, it will be perceived that the most changeable are apt to be the most sickly months, and *vice versa*. But the table will better explain itself to the curious observer, and we will pass on to the next without any farther inferential observations.

BAROMETRICAL TABLE.

Months.	AUGUSTA.					ATHENS.				
	1845	1846	1847	1848	Total mean.	1845	1846	1847	1848	Total mean.
January	29.88	29.74	29.89	29.88	29.84	29.39	29.25	29.45	29.48	29.33
February	" 80	" 79	" 79	" 78	" 79	" 37	" 23	" 35	" 39	" 33
March....	" 83	" 74	" 81	" 84	" 80	" 42	" 25	" 40	" 43	" 37
April,....	" 77	" 72	" 83	" 88	" 80	" 37	" 38	" 42	" 47	" 41
May.....	" 77	" 69	" 69	" 71	" 71	" 36	" 28	" 29	" 38	" 32
June.....	" 82	" 72	" 76	" 79	" 77	" 47	" 34	" 38	" 43	" 40
July.....	" 72	" 75	" 83	" 78	" 77	" 37	" 37	" 40	" 41	" 37
August...	" 75	" 78	" 80	" 79	" 78	" 35	" 42	" 37	" 44	" 39
Sept.....	" 77	" 78	" 78	" 75	" 77	" 36	" 44	" 38	" 41	" 39
October .	" 88	" 85	" 68	" 76	" 79	" 48	" 43	" 41	" 39	" 42
Nov	" 76	" 78	" 91	" 87	" 83	" 20	" 42	" 44	" 41	" 36
Dec.....	" 73	" 88	" 90	" 87	" 84	" 30	" 43	" 42	" 44	" 39
	80	77	80	80	79	37	35	39	43	37

From this table we perceive that May presents the lowest on the barometer for the four years, at Augusta; and December and January the highest. May is likewise the lowest at Athens, and October the highest. Taking the seasons separately, there is a considerable variance between the two points. Thus, at Augusta, the pressure of the atmosphere is heaviest in the winter, as 82.3 against 77.0 for spring; 77.2 for summer, and 79.6 for autumn. At Athens, it stands winter 35.0, spring 36.6, summer 38.6, and autumn 39.0, making the atmospheric pressure greatest in the summer and lightest in the fall. We observe also that the six cold months at Augusta stand higher than the six warm, 81.5 against 76.6; while it is just reversed at Athens, 36.6 for the six cold, against 38.0 for the six warm. Why two cities situated so near to each other should present such marked differences in the barometrical scale, we are not able to determine, but leave it for those better skilled in meteorology.

RAIN TABLE.

	AUGUSTA.					ATHENS.				
	1845	1846	1847	1848	Total.	1845	1846	1847	1848	Total.
Jan.....	4.30	4.20	4.50	2.85	15.85	4.48	3.96	4.70	1.44	14.58
Feb. ...	2.50	4.15	1.95	6.30	14.90	0.95	2.74	4.05	4.19	11.92
Mar....	2.00	6.90	3.60	1.75	14.25	0.70	4.53	4.24	2.48	11.95
April...	0.00	3.40	1.90	5.15	10.45	0.12	4.43	0.33	3.65	8.53
May...	2.80	3.30	4.65	3.90	14.75	1.21	1.78	3.05	2.78	9.82
June...	2.60	4.75	4.50	3.35	15.20	0.48	9.65	4.34	4.82	19.29
July....	1.60	2.90	9.28	4.50	18.28	3.60	5.70	6.21	6.81	22.32
Aug	3.45	6.45	5.87	4.30	20.07	0.74	3.12	5.11	3.42	12.39
Sept ...	1.00	0.70	3.16	3.55	8.41	0.58	1.01	3.26	1.20	6.05
Oct.....	7.00	3.70	0.55	1.45	12.70	8.90	3.46	0.25	1.26	13.87
Nov....	0.80	2.15	1.00	2.55	13.80	0.71	2.03	0.84	2.68	6.26
Dec....	5.20	1.85	1.35	2.45	10.67	4.93	1.91	1.88	4.41	13.13
Aggre.	33.25	44.45	41.31	42.10	161.11	27.41	44.32	38.26	40.15	150.14

This table indicates the greatest fall of rain in the month of July in both Augusta and Athens, and the least in September. The summer at both points is the rainiest season, and autumn the least so. This differs from the barometerical table in giving a simularity of results for most of the months and all of the years as to the quantity of rain at the two points, which shows that the barometer is an equivocal test as to the general humidity of the atmosphere. During the four years there fell nearly eleven inches more rain at Augusta than at Athens, owing doubtless to its nearest proximity to the ocean; the average fall at Augusta being 40.27, and at Athens 37.53.

And now we come to the diseases of middle Georgia, concerning which it may be proper to remark, in the outset, that they have undergone a considerable change within the memory of man, both as regards their pathology and general fatality. Philosophical reasons no doubt exist, for all of those changes, some of which we can readily divine, others remain hidden. The two classes in which the most marked evidences of change exist are those of the digestive system and idiopathic fevers. The one class being now much more extensive and virulent in their character than formerly, the other having vastly moderated, oth as to extent and severity. In reference to the former, we doubt not the prime if not the only cause of their increase, depends upon an overplus of the luxuries and refine-

ments of the age, to which our fathers were comparative strangers. The latter depending for its very existence upon a subtle and hypothetical agency will leave us to a considerable extent in the dark in reference to its mode of aggression or retrocession among the masses of our race, but as we expect to speak more fully of this subject before we bring this paper to a close, we leave it undisturbed for the present.

Being, as before stated, a rural district, it is hardly to be supposed that diseases dependent to any extent on animal effluvia, originating in crowded masses of human beings, would prevail in Middle Georgia. And, for this same reason, contagious affections have been slow to develope and extend themselves. In the year 1839, yellow fever prevailed to an alarming and fatal extent in the city of Augusta, owing to the river at that place being laid bare to the summer's sun, by the unprecedented drought, and all the filth of years being thus exposed and brought to bear upon the unsuspecting inhabitants. This is the only instance on record of such an occurrence in this highly favored region. The small-pox has occasionally paid our cities flying visits, but it has never been able to fix itself for any length of time in our population. The cholera, that most fearful of pestilences, has, up to the present time, left us in undisturbed possession of our happy homes. Nor has even the typhoid fever prevailed to any extent among us, if at all. There have, perhaps, been a few well-marked cases, but the mass of them, so called, are misnomers, and belong entirely to another class of fevers.

Of what are generally termed idiopathic fevers, we have the common continued, inflammatory, bilious remittent, and intermittent—the two first prevailing mostly in the cold months, and the two last in summer and autumn. The common continued fever frequently takes on a typhoid type after the first or second week, and hence has received that name by many physicians throughout the country. It is better known among the common people as the "*slow fever*," from the tedious course it runs, frequently terminating either favorably or unfavorably at the end of the fourth or fifth week. I doubt not the true pathology of this disease is a sub-acute inflammation of the mucous membranes, originating in atmospheric vicissitudes, or super-

vening on the partial subduction of more violent fevers. The stimulating plan of treatment, as brandy, morphine and quinine, has consequently resulted most disastrously to all who have been brought under its influence. On the contrary, the *expectante* plan, of gentle antiphlogistics and counter-irritants, has relieved at least 19 cases in 20, as my tables will show.

The etiology and history of our autumnal fevers, presents a more interesting subject for the investigation of the medical philosopher than perhaps any other of the present age. As to the diagnosis, treatment, &c., we know much. Medical science may truly be proud of its achievements in the improved and almost universally successful treatment now instituted for the bilious remittent fever, once the great scourge of Southern climes. Formerly, it was a very fatal type of disease; now, I hesitate not in making the assertion, that uncomplicated remittent fever, as it prevails in Middle Georgia, never proves fatal, under a judicious and scientific treatment, if taken in time. I doubt not the virulence of the disease has greatly abated in late years, and even under the old plan of treatment, the mortality would not now be so great. But when we remember that the sole object of the practitioner of that day seemed to be to mercurialize his patient—particularly if one or two heavy charges of drastic purgatives did not succeed in ejecting the enemy, and during the whole course not a drop of cold water was ever allowed, no matter how dry the tongue or how burning the thirst, we wonder no longer at the greatness, but rather at the smallness of the mortality. Luckily for suffering humanity, a few wise heads soon discovered that every patient who obtained water by stealth, recovered, and those who did not, died, or suffered long before recovery; a consequent modification was made in the treatment, which has been still farther improved upon, under the benignant light of the Broussaian philosophy, until the monster has become a mere child, to be throttled and overcome by every tyro in medicine.

I believe it has been universally conceded that remittent and intermittent fevers originate in the same cause; only the latter is of a much milder type than the former. One thing is certain, that they frequently run into each other, and are intimately commingled whenever produced. At the same time,

whether they are produced by exactly the same cause, and only modified by the constitutions they act upon, or whether the modification exists in the virulence or specific character of the poison, remains a problem to be solved. We are inclined to think that the same cause produces both diseases, only the one is more diluted than the other, and, by consequence, acts with less violence. It would seem, however, that the malignant intermittent of the South-Western States, known as *congestive fever*, would indicate a different cause for the remittent and intermittent types of fevers. It is at best a *questio vexata*, and must ever remain so until further light is thrown upon the physical and chemical qualities of *malaria* itself, if there be any such substance.

The old medical writers generally concur in the opinion, that malaria is a gaseous poison, existing in the atmosphere, the product of heat, moisture, and vegetable putrefaction. But upon the repeated failure of chemists to detect any such gas in districts where periodic fevers prevail, a number of new theories have been introduced from time to time, with a view of supplanting the old, none of which, however, have been established on a permanent basis. One has supposed that fevers are dependent on certain electrical states of the atmosphere, not remembering that this would as effectually destroy their endemic properties as the old gaseous theory. Another has attributed their production to certain animalculæ having their origin in marshy grounds; and, still another, to a superabundance of aqueous vapor in the atmosphere. Prof. Mitchell has transcended all others in the boldness and originality of his conceptions, by advocating a cryptogamous origin of malarious fevers, which only lacks what all the others are deficient in, a basis of well-authenticated facts and experiments. Without these, it is almost useless to advance a theory on any subject in this age of inductive philosophy.

A recent writer* in the *Southern Medical and Surgical Journal*, has written a sensible article on "Malarious Influences;" in which he suggests that periodic fevers are produced by a combination of physical agencies, such as light, heat, electricity,

* Dr. Jones, of Athens, Ga.

humidity, &c. This suggestion is well worthy the attention of the medical world, and should be thoroughly investigated by a series of well-conducted experiments. But, after all the new theories which have been offered, I am not prepared to condemn in toto the old; at least so far as it assigns to heat, moisture, and vegetable putrefaction, the origin, either remote or proximate, of our autmnal fevers. Nor am I prepared to deny that malaria is a specific poison, generated by the above causes, simply because it has never been detected and analyzed by chemists. We know some of the laws which govern it and some of the effects it produces, which is about all we know about caloric, magnetism and electricity. We have not seen nor analyzed either of these fluids; but there is no one so bold as to doubt their existence, so palpable have been their effects to every observer.

The experiments heretofore instituted for the detection of the substance in question have generally been directed to analysis of the atmosphere, in the expectation of finding a poisonous gas, all of which, have signally failed. The course adopted by M. Julia, appears to me to be the most philosophical; that is, to seek for it rather in the aqueous particles of the atmosphere. He found that the dew gathered in the neighborhood of marshes, contains a peculiar matter, capable of fermentation. And M. M. Thénard and Dupuytren found that the carburetted hydrogen gas, disengaged from marshes, left in the water through which it passed, a peculiar and very putrescible matter. Now if upon a repetition of these analyses the same results are produced, it will go very far to establish what is now mere conjecture, that this substance has something to do with the production of autumnal fevers.

We will here introduce a few arguments in support of the theory, that the simultaneous action of a certain amount of heat, moisture and vegetable putrification is essential to the production of periodic fevers. If one be absent, the remaining two are incapable of producing the effect. While the heat and moisture seem to be the active agents in the generation of this poison, the vegetable matter is passive, but furnishes the material essential to its production. All seem equally to coöperate in its evolution; the heat to evolve it from the earth, and the water to hold it in solution in the atmosphere.

That caloric is an efficient agent in the production of malaria is clear from the fact that it rarely exists in cold climates, and then always during warm weather; that it never prevails in winter in temperate latitudes, but always at the heel of summer, after the sun has had its most powerful effects for months together; and it never disappears till the first autmnal frosts. This is equally true in reference to moisture. Who ever knew fever to prevail of a dry summer, remote from rivers and marshes? But when the spring and summer has been wet, and the autumn dry, we may look for a large crop of fever; at such times the hills and and ridges are themselves not exempt, owing to the rapid decay of vegetation, and evaporation from the forests and soils. But if the marshes and rivers are kept full by heavy autumnal rains, and their stores of filth are withheld from the sun, their borders are likely to prove even more exempt from malaria, than the high grounds, where the heat is more powerful.

At this juncture we propose to introduce a table, which will doubtless throw some light on the connection between the humidity of the atmosphere and the production of periodic fevers. For if we can establish, by undeniable facts, that a maximum humidity is a constant and essential concomitant of malarious influences, we will have gone far towards the elucidation of a subject concerning which the medical world is shamefully ignorant. The table is intended to illustrate what has grown to be an adage, in the Southern States, that a wet spring and summer with a dry fall will produce a sickly season. We have therefore put down the per cent. of rain for the spring, summer and fall months. The average fall of rain for each month during the five years, being 3.35 inches, we put this down as 1.00, and graduate all the others by it. And so of fevers; instead of putting down to each month the actual number of cases that have occured, we have taken the per cent. in comparison of all the cases of disease for each year separately; inasmuch as our practice has regularly increased, since 1845, and the number of cases for the present year is much larger than usual, and of course the extent of population greater in which it was done.

TABLE OF RAIN AND FEVERS.

	1845.		1846.		1847.		1848.		1849.	
	Per cent of rain.	Per cent of fevers	Per cent of rain.	Per cent of fevers	Per cent of rain.	Per cent of fevers	Per cent of rain.	Per cent of fevers	Per cent of rain.	Per cent of fevers
March....	0.59	.....	2.05	.....	1.07	.....	0.52	.....	0.59	.....
April.....	0.00	.....	1.01	.....	0.56	.....	1.53	.....	0.35	.....
May.....	0.83	.....	0.99	.....	1.38	.....	1.16	.....	1.92	.....
June.....	0.77	.....	1.41	.....	1.34	1.10	1.00	1.25	1.42	.....
July	0.47	.....	0.86	1.85	2.73	2.20	1.34	2.50	4.10	0.58
August...	1.02	7.40	1.92	7.40	1.74	5.50	1.28	13.75	0.64	8.12
Sept.....	0.29	5.92	0.20	20.35	0.94	5.40	1.06	7.50	0.10	14.50
Oct.....	2.08	2.96	1.10	14.80	0.16	7.60	0.43	1.25	2.04	5.80
Nov.....	0.23	.....	0.64	3.70	0.29	.....	0.76	3.75	.....	3.43

It should be borne in mind that the per cent. of rain is taken from the Augusta table, a place in about the same latitude, but some sixty-five miles east of Sparta, where the practice occurred. By way of still further illustrating the principle in question, we will condense the above table, so as to present the seasons and years in the aggregate, thus:

	1845	1846	1847	1848	1849
Per cent. of rain Spring and Summer.....	0.61	1.37	1.47	1.13	1.50
Do. Autumn.....	0.86	0.64	0.45	0.75	..07
Per cent. of Fevers.....	16.28	48.10	41.80	20.00	32.48

It will be perceived by this table, that 1845 was the healthiest year, presenting also the dryest summer and wettest fall but one. By reference to the former table it will be seen that the maximum of fevers was in August, and the minimum in October, which can be accounted for in the fact that October was too wet for the production of malaria, while September was too dry. In August, a little over the average quantity of rain fell, which gave enough moisture, with the intensity of the heat, to produce more fever than either of the other months, though from the lack of the moisture, less than any other year, save one for the same month. In 1846 and '47, we had decidedly wet springs and summers, and dry autumns, and conse-

quently a decided increase of fevers over the preceding year of 1845. In 1848, we had a moderately wet spring and summer and tolerably dry fall. The fevers consequently abate very much from the preceding years. In 1849 we had the rainiest spring and summer, which promised a great crop of fevers, but the heavy rains set in during October and cut it short, so as to present but little over an average per cent. for that season. A very wet July and a dry August, make the latter a sickly month. A dry September still increases the malaria, but a wet October at once stops its ravages and greatly reduces the per cent. of fevers for that month.

As to the universal presence of decaying vegetation in the production of malaria, nothing has been more clearly demonstrated. It is known throughout the South that a rich soil forms the hot bed of autumnal fevers, while poor lands are almost entirely exempt. Why is this, but from the vast crops of vegetation grown on the former, which have been falling and accumulating for centuries, until the earth is full of the very principle which heat and moisture is constantly generating and evolving in warm climates, to the detriment of the health of the inhabitants.

Were we disposed, we could find many instances recorded by medical men, proving directly the point in question. Thus, Rush mentions examples of fevers originating from the decomposition of coffee, potatoes, pepper and other vegetables; while Burnett describes a fearful fever produced in a ship's crew from the action of bilge water on chips and shavings left in the hold from repairs in the magazine. The same thing has been produced from the leakage of sugar in a damp hold. But our limits forbid the introduction of much extraneous evidence, and we must proceed with our own observations.

As a farther evidence of the principle in question, we notice the fact that fevers almost universally occur at that period of the year when nature is in a decaying state, when the leaves are falling and rattling, and the sun is able to penetrate into many a stagnant pool filled with vegetable filth, and hid from his rays the whole summer through. In the same way all new countries become malarious when first cut down. The decomposing forests, roots and stumps of trees, as well as the soil exposed to the combined action of sun and rain, produces an annual return of

malaria, which is only dissipated as the country gets older, and dense foliage rarer. Thus, the counties of Putnam, Morgan, Baldwin and Jones, west of the Oconee river, were settled in 1806. In about ten years thereafter, they contained a dense population, and the forests were soon levelled with the ground; the consequence was, they suffered much from autumnal fevers till about 1830. Now it is comparatively an old country, and but few new grounds are brought into cultivation, it is quite healthy, in the main, the fevers being confined to certain marshy districts. The sickliest point now in this (Hancock) county is on Buffalo Creek, which has within some ten years been cut down and brought into cultivation. Previously it was never troubled to any extent with periodic fevers.

But it is useless to extend this paper to an undue length, by presenting instances of this kind. Every Southern practitioner is aware of the existence of such phenomena, for which there is no satisfactory method of accounting but on the principle that decayed vegetation has much to do with the production of malaria. And here we would ask, if heat and moisture alone are capable of producing it, independent of vegetable matter, why is it that peat bogs are so healthy, even where the sun has free access and the drying principle is going on? Is it not owing to the fact that the vegetable matter contained in them is sub-carbonized, and, consequently, incapable of decomposition?

A striking proof of the existence of malaria as a tangible substance, is found in the fact that it may be drifted by winds to a considerable distance from the place where it was generated. Thus, at Eatonton, in Putnam Co., of this state, in the year 1823, there occurred a fatal form of bilious fever, which carried off many of the inhabitants. About a mile east of this village was a mill-pond, remarkable for its filth, which, having run dry was exposed to the summer's sun. A concentrated poison was generated, which, being swept by easterly winds to the village, spread disease and death wherever it went. So fully were the citizens convinced of this fact, that they had the mill-pond abolished by law as a nuisance to the public health.

In 183– the village of Mount Zion, in Hancock Co., was visited by a fearful scourge of autumnal fevers. I was informed by an intelligent and observing gentleman, whose family suffered no little, that just previous, an easterly wind prevailed for several

weeks which blew directly across Beaver Dam creek nearly a mile distant, whose marshes had become dry under the autumnal sun. I have frequently, in the course of my practice, known fevers to prevail on one side of a creek for days together, while the other was entirely exempt; and there is no way of accounting for it but by the drift of malaria by the winds. Upon the same principle, and no other, it is often borne to the summit of the highest hills, where it becomes more pestiferous than on the very banks of the river whence it emanated. For it is a fact that persons who have been inured to it suffer less than those who enjoy a pure atmosphere—upon the same principle, I suppose, that the same quantity of opium would not be felt by one accustomed to take it, while it would prove fatal to another person. The worst cases of fever we ever have in Middle Georgia are in those persons who have imprudently ventured, during the summer, where the malaria seems to be more concentrated, and return again to a pure atmosphere.

Having said thus much in reference to the etiology of periodic fevers, we must leave the subject for the calm consideration of unprejudiced minds, hoping that if no other good be done by its discussion it will at least elicit the investigation of all those who have opportunities for observing facts in reference to it.

By way of better ascertaining the general character of the diseases of middle Georgia, we now propose to offer several tables, comprising all the cases occurring in our practice since 1843. The first will have reference to disease as it effects the general functions of the human system and the periods of the year at which it makes its invasion under these several forms.

General classes of Disease.	January.	February.	March.	April.	May.	June.	July.	August.	Sept.	October.	Nov.	Dec.	Total.	Per cent.
Digestive	15	30	30	73	66	55	66	56	86	69	26	21	602	28.0
Respiratory	21	36	22	32	21	12	27	10	18	28	24	27	288	13.0
Brain and Nervous	11	11	10	5	15	12	10	44	13	10	9	12	132	5.9
Osseous	4	7	9	6	11	16	16	16	16	8	9	12	126	5.7
Urinary	0	2	4	6	6	6	4	7	3	7	2	2	50	1.8
Visual	4	4	3	4	2	3	2	2	2	1	1	1	29	1.3
Cutaneous	5	0	9	8	7	4	5	4	6	2	6	7	63	2.8
Articular	5	7	6	5	5	4	5	4	5	3	5	1	55	2.5
Peculiar to women	17	14	24	32	25	26	20	33	23	25	19	22	280	12.6
Abscess	3	3	1	4	5	7	5	9	6	3	4	7	57	2.6
Periodic Fevers	6	3	4	5	7	3	20	48	74	59	15	6	250	11.3
Continued Fevers	6	4	3	4	3	1	0	6	5	9	3	3	46	2.0
Eruptive Fevers	7	11	7	4	5	1	1	2	3	1	3	3	48	2.1
Injuries	3	15	7	8	6	10	8	7	5	10	11	11	101	4.5
All others	6	3	9	9	4	4	10	7	11	4	9	7	83	3.7
Aggregate	123	148	148	203	178	164	199	225	285	249	147	139	2210	100.0

From the above table we make the following inferences:—That January is the healthiest month in the year, and September the sickliest. That there are two distinct climaxes of disease during the year, the greater in September the smaller in April. The first ascending from June to September where the climax is formed, and thence descending in regular gradation to January, when it begins to ascend again, and forms the next climax in April, and then it descends to June, where it terminates. The unhealthiness of December depends mainly on periodic fevers, that of April on diseases of the digestive system—probably owing to the introduction of early vegetables and unripe fruits among children. More than one fourth of all the diseases classified belong to the digestive functions, one eighth to the respiratory, one eighth to those peculiar to woman, and nearly an eighth to periodic fevers, leaving three eighths to be divided among all the other classes.

For the better understanding of the curious in reference to the diseases of middle Georgia I will here introduce a table of specific diseases, embracing the best part of those occurring in my practice in Hancock County, since 1843.

1*st. Digestive System.*

Diarrhea, . . .	115	Gastro-enteritis, . . .	20
Gastric fever, . . .	68	Hepatitis, . . .	17
Colic, ...	60	Constipation, ...	12

Worm fever,	55	Irritable Stomach,	11
Dispepsia,	47	Cardialgia,	7
Gastritis,	33	Hemorrhoids,	6
Dentition,	28	Hematemesis,	4
Dysentry,	28	Prolapsus Ani,	4
Cholera Morbus,	26	Enteritis,	2

2nd. Respiratory.

Catarhal fever,	61	Catarrh,	35
Influenza,	42	Bronchitis,	33
Pneumonia,	30	Phthisis Pulmonalis,	3
Pleurisy,	10	Hemoptysis,	2
Asthma,	9	Catarrhal Consumption,	1
Hooping Cough,	6	Laryngeal Consumption,	1
Croup,	5		

3rd. Diseases Peculiar to Woman.

Parturition,	75	Amenhorrea,	14
Pethora, during gestation,	32	Menorrhagia,	13
Threatened Abortion,	25	Metritis,	9
Dysmenhorrea,	15	Leucorrhea,	7
Abortion,	15	Puerperal Convulsions,	7
Uterine Hemorrhage,	14	Peritonitis,	6
Prolapsus Uteri,	14	Attached Placenta,	4

4th. Idiopathic Fevers.

Intermittent,	159	Common Continued,	26
Bilious Remittent,	80	Inflammatory,	18
Congestive,	10	Continued fevers,	44
Periodic Fevers,	249		

5th. Brain and Nervous System.

Nervous Headache,	21	Apoplexy,	2
Convulsions, children,	19	Catalepsy,	2
Spinal Irritation,	12	Hemeplegia,	2
Neuralgia,	11	Tetanus,	1
Epilepsy,	9	Hysteria,	1
Spinal Meningitis,	6	Chorea,	1
Insanity,	4	Pleuritis,	1
Delirium Tremens,	3	Arachintis,	1

6th. Eruptive Fevers.

Rubeola,	25	Scarlatina,	3
Varicella,	8	Roseola,	3
Eruptive Rheumatic Fevers,	6		

7th. Diseases of Skin.

Urticaria,	18	Tinea Capitis,	6
Herpes,	14	Red Gum,	3
Erysipelas,	8	Ptyriasis,	1
Scabies,	6		

8th. Urinary Organs.

Strangury,	11	Incontinence of Urine,	3
Gonorrhea,	8	Irritable Bladder,	3
Nephritis,	5	Varicocele,	2
Cystitis,	5	Stricture of Urethra,	2
Syphilis,	4	Paraphymosis,	1
Calculus,	4	Impotence,	1
Retention of Urine,	3		

9th. Visual Organs.

Opthalmia,	22	Ectropium,	1
Amaurosis,	3	Cataract,	1

10th. Circulation.

Hypertrophy,	3	Phlebitis,	2
Anemia,	2	Varicocele,	1
Nervous Palpitation	2	Valvular disease of heart,	1

11th Surgical Cases.

Contused wounds,	40	Dislocation of lower jaw,	2
Abscess,	35	Fracture of lower jaw,	1
Incised wounds,	20	Necrosis,	1
Furunculus,	11	Gun shot wound,	1
Burns,	8	Dislocation metatarsal bone of thumb,	1
Whitlow,	5		
Tongue tie,	4	Rupture of ligaments of 3rd and 4th cervical vertebræ,	1
Fracture of Os Femoris,	3		
Distorted spine,	2	Dislocation shoulder joint,	1
Fracture of os humeri,	2	Fracture of clavicle.	1

In the above table we have not embraced a number of the less important diseases, but have simply presented such as are of most frequent occurrence. We leave the reader to make such deductions as he chooses from them, as the length of this article admonishes us to hasten to a close. We will add to it a table embracing the mortality of the above diseases.

1st. Digestive System.

Diarrhea, Teething,	8	Worm Fever,	2
Gastro-enteritis,	4	Hematemesis,	1
Hepatitis,	2	Gastritis,	1

2nd. Respiratory System.

Phthisis Pulmonalis,	2	Catarrhal fever,	1
Pneumonia,	4	Hydrothorax,	1
Acute Bronchitis,	1	Croup,	1
Cataarhal Consumption,	1	Ulcerated sore throat.	2
Hooping Cough,	1		

3rd. Diseases Peculiar to Woman.

Puerperal Convulsions,	4	Acute Hysteritis,	2
Uterine Hemorrhage,	2		

4th. Brain and Nervous System.

Convulsions, teething,	1	Arachnitis,	1
Rachitis,	1	Delirium Tremens,	1
Phrenitis,	1		

5th. Idiopathic Fevers.

Continued Fever,	2

6th. Eruptive Fevers.

Scarlatina,	1	Eruptive Rheumatic Fever,	1

7th. Circulation.

Valvular disease of Heart,	1	Hypertrophy,	1

8th Urinary.

Acute Cistitis,	1

9th. Tumors.

Cancer of Breast,	1	Fungus Hematodes,	1
Fracture Vertebra,	1	Old Age,	1
Amputation for dry mortification of foot,	1	Unknown,	2
		Still-born,	2

Thus, out of 2.039, we have 60 deaths, being 2.94 per cent. The mortality of diseases of the digestive organs is 3.33 per cent.; the respiratory, 5.89; diseases peculiar to women, 3.2; brain and nervous system, 5.2; eruptive fevers, 4.4; idiopathic fevers, 0.34; and urinary, 1 in 52. It is remarkable that the mortality of idiopathic fevers is so small—there being of periodic fevers, not a single death—of continued fevers, only 2 in 44; making a mortality of 4.4 per cent. This latter embraces that fearful type of fevers generally denominated typhoid. The result of the table certainly speaks volumes for the healthiness of our region in comparison with many other sections of the South.

One more table, which indicates the susceptibility of the different races, sexes and ages to different forms of disease, and we are done:

	Whites.	Per cent.	Blacks.	Per cent.	Males.	Per cent.	Females.	Per cent.	Under 5 yrs.	Per cent.	Bet. 5 and 20 yrs.	Per cent.	Over 10 yrs.	Per cent.
Digestion,	433	29.0	162	21.6	241	27.2	306	24 2	152	40.1	118	22.6	223	17.2
Respiratory,	204	13 8	180	54 0	116	13.1	150	12.7	50	13.2	57	10.9	176	13.6
Brain and Nerv.,	87	5.9	37	4.9	58	6.5	62	4.9	21	5.5	7	1.3	95	7.3
Rheumatism,	30	2.0	22	2 9	17	1.8	24	2.6	0	.0	10	1.9	42	3.2
Idiopathic Fev.	199	13.5	92	12.2	166	18.7	121	9.6	13	3.4	98	16.8	186	14.3
Urinary,	30	2.0	22	2.9	27	3.0	14	1.9	5	1.3	4	0.7	43	3.3
Visual,	17	1.1	7	0.9	18	1.9	11	0.8	2	0.5	6	1.1	21	1.6
Teeth,	69	4 7	57	7.6	42	4.7	80	3 6	0	.0	37	7.0	86	6.6
Cutaneous,	76	5.1	27	3.6	43	4.8	54	4.3	25	6.6	34	6.5	46	3.5
Peculiar to women,	157	10.7	116	15.4										

The per cent. of the above table is made out according to the ratio of each class, and not of the whole number of patients. This shows that although the actual number of cases of the digestive system among the whites is more than double that of the blacks, yet the aptitude of the whites for this class of diseases over the blacks is as 29.0 per cent. to 21.6, a fact which may be accounted for from their different modes of living, both as to exercise and diet. It will also be perceived that the blacks, by a very large per cent., are more subject to pulmonary affections. In idiopathic fevers, however, this is reversed by a small per cent.

As the limit of our paper is exhausted, we must leave the table for others to philosophise upon as best they may, referring them to our own inferences from a similar table in the November No. of the *Southern Medical and Surgical Journal* for 1849. At some future day we hope to take up the subject again, with the lights of a more extended experience and larger table of diseases, and present such deductions as may be clearly inferrible from the premises. In the mean time we earnestly solicit the aid of all Southern practitioners, in an enterprise so well calculated to advance the interests of their profession and the well-being of mankind in general.

Sparta, Ga., Jan. 1st, 1850.

*On the susceptibility of the Caucasian and African races to the different classes of disease.**

With regard to the susceptibility of the Caucasian and African races to the different classes of disease, it is difficult to form a just ratio, owing to the fact that the services of physicians are required oftener for the former than the latter. On large plantations, masters and overseers become, from necessity, pretty good routinists in mild cases of fevers; and it is only in bad cases that physicians are called in. The consequence is, in a population where the blacks largely predominate, (6,407 to 3,642 in the county,) we have but 564 cases of blacks to 1061 of whites. We believe, however, that there are more cases and a greater diversity of disease among the whites than the blacks.

The ratio of deaths, according to the number of cases for each class, is 2.57 for the whites against 3.54 for the blacks. I think some allowance must be made from the fact, that cases among blacks are more frequently delayed until it is too late to effect much: but, at the same time, most medical men of close observation will admit, that the Caucasian seems to yield more readily to remedies (*cæteris paribus*) than the African. It is much more

* We deem it best to insert in this place, the article in the Southern Medical Journal just referred to by Dr. Pendleton. The subject of the different susceptibility of the two races to disease is one of peculiar interest, and we invite to it the special attention of Southern physicians. Dr. Pendleton has the honor of here commencing an investigation which may lead to the most interesting and important results. Every thing relative to the negro race, which constitutes so large a portion of our population, is worthy the consideration of the inhabitants of the Southern States.—Ed.

difficult to form a just diagnosis or prognosis with the latter than the former, consequently the treatment is often more dubious. While then, as our tables indicate, there is less actual disease among blacks than whites, it is of a more unmanageable character and the mortality is greater.

The following table will indicate the susceptibility of the different races, ages and sexes, to different forms of disease.

TABLE

					Both Races.									
	White.	Per cent.	Black.	Per cent.	Male.	Per cent.	Female.	Per cent.	Under 5 years.	Per cent.	Between 5 & 10	Per cent.	Over 20.	Per cent.
Digestive	303	28.7	120	21.2	158	25.2	219	23.7	105	55.9	90	31.8	126	19.2
Respiratory	156	13.8	163	28.6	86	13.7	125	12.4	42	22.3	43	15.2	136	20.8
Brain and Nervous	57	5.4	25	4.4	40	6.4	38	4.1	13	7.4	5	1.7	64	9.7
Rheumatism	21	2.0	17	3.0	11	1.9	26	2.8	0	.0	8	2.8	30	4.6
Idiopathic Fever	153	14.5	69	10.4	129	20.6	89	9.6	8	4.2	75	26.6	144	22.0
Urinary	21	2.0	20	3.5	21	3.3	19	2.0	4	2.1	3	1.0	34	5.2
Visual	11	1.0	5	0.8	13	2.0	7	0.7	2	3.0	5	1.7	14	2.1
Teeth	62	5.9	46	8.1	37	5.9	67	7.2	0	1.0	34	12.0	71	10.8
Exanthemata	46	4.3	20	3.5	24	3.8	37	4.0	14	.0	19	6.7	35	5.3
Peculiar to women	111	10.5	87	15.2						7.4				
	941		572		519		627		188		282		654	

It will be perceived from this table that the whites are more subject to diseases of the *prima viæ* than the blacks: a fact easily accounted for from their different modes of living, both as to exercise and diet. But upon what etiological principles are the latter race so much more subjected to pulmonary affections? Will their greater exposure, winter and summer, account for so great a disparity, or is there with them so great an affinity for the torrid zone, that their constitutions are not fitted for the cold even of our temperate climate? As to diseases of the brain and nervous system, we can more readily account for the greater susceptibility of our race, in the fact that they are brought into much greater activity from intellectual pursuits, and have doubtless, by nature, a more delicate nervous fibre.

But here another interesting question rises in reference to the

disparity between the two races in diseases peculiar to women. Reasoning *a priori*, one would have to suppose that the delicate white female would have had a much oftener demand for the physician than the coarse muscular negress. But such is not the fact. The table stands 15.2 per cent. for blacks, to 10.5 for whites. This disparity will be made much more manifest if we abstract the cases of parturition, which is nothing but fair, as physicians are seldom called to attend slaves except in preternatural labor. Thus, out of 56 cases, we have 38 whites to 18 blacks, reducing the per cent. to 6.9 and 12.4.

In philosophising upon this immense difference, we are led to the conclusion, from facts within our knowledge, that it originates in an unnatural tendency in the African female to destroy her offspring. All country practitioners are aware of the frequent complaints of planters upon this subject. Whole families of women fail to have any children, and in many instances these barren females become subject to chronic uterine affections. Out of 31 cases of abortion and miscarriage, in our table, we have only 9 for 1051 whites, and 22 for 554 blacks, being 0.8 for whites, and 3.9 for blacks—more than four to one. This table either teaches that slave labor is inimical to the procreation of the species from exposure, violent exercise, &c., or, as the planters believe, the blacks are possessed of a secret by which they destroy the fœtus at an early stage of gestation. That there are several domestic remedies calculated to produce this effect is evident, but whether they are acquainted with them is a question, and whether the natural instinct of the mother to love and protect her offspring should be overruled so frequently by the moral obtundity of this class of people, is another question for the philosopher and the philanthropist. Certain it is, that the statistics of this country show a marked increase of the white over the black, (about as 25 to 20 per cent.,) which has been heretofore accounted for mainly from the influx of foreigners; but our table indicates a cause worth investigating further, involving, as it does at once, the interest of the planter and the well being of the African race.

"We further find, from the above table, that the blacks are more subject to rheumatism, urinary affections, and diseases of the teeth. I suppose that their greater exposure, both in their daily avocations and their dwellings, may account for their over tendency to rheumatism. While the very causes which have been supposed to produce among them a greater amount of disease of

the genital functions, would sympathetically act upon the urinary organs and produce more diseases of this class. But how may we account for their being more subject to diseases of the teeth? I have always believed this to be the fact, for you will find but few negroes who are not subject to tooth-ache. I suppose it must be owing to their sharing with the whites in some of the evils of civilization, such as hot bread, acids, medicines, &c., without possessing equal advantages with the latter in the benefits which dental surgery now offers in the cure and prevention of diseased teeth.

But here we have an interesting class, viz., idiopathic fevers, in which the whites largely predominate, as 14.5 to 10.4. That the African is less susceptible to malarious influences than the white I have believed from general observation heretofore. Although more exposed to the cold dews and hot sun of autumn, as well as having more filth about their habitations, they seem to be less liable to periodic fevers, and more readily recover than the white. Is this not owing to the fact, that as heat is an acknowledged principle in the formation of marsh miasm, (or that hypothetical agency, whatever it is, that induces autumnal fevers,) the anglo-saxon race inhabiting this country, being from a colder region, is less able to stand diseases from a southern clime than Africans from the torrid zone? We know, that in Charleston and New-Orleans, natives are exempt from endemics, where one night's sleep of a stranger will often superinduce a fatal form of fever. This I have frequently observed myself in the former city, while under the tutelage of my esteemed and honored preceptor, Professor Dickson. Are not the constitutional tendencies and susceptibilities of a race, which are impressed upon them by climate, so permanently fixed as to remain for centuries after the influences of another climate have been brought to bear upon them? This is a fact, I think, clearly established. Hence, the fresh imported African can sustain the deathly climate of our rice fields far better than the white, and (but in a decreasing ratio) with less mortality than the native negro from the up-country.

The whites are more subject to diseases of the eye and exanthematous affections, by a small per cent. The number of cases being few, however, and the differences not well marked, it will

be necessary to make further investigations, before any definite facts are reached.

With regard to the sexes, we find that the males are more subject to diseases of the digestive, respiratory, urinary and visual organs, as also the brain and nervous system, while the females, apart from diseases peculiar to them, are more liable to the exanthemata, rheumatism and diseases of the teeth. The females predominate over the males by a considerable per cent., in the general liability to disease. Thus, out of 1549 cases, we have 924 females, against 625 males. Abstract from those 204 for diseases peculiar to women, and they still have a considerable ascendency. But the diseases of females are less fatal in their character than those of males. Thus, out of the 924, we have 26 deaths, or 3.2 per cent. of females—while out of the 625, there are 20 deaths, or 3.2 per cent. of males. I believe that registers of births show that there are more females than males born into the world ;* if so, their over mortality may be accounted for on another principle than a greater longevity, though I am somewhat inclined to think that females will not average such length of life as males in this land of freedom and peace. I should like further statistical information on this subject.

Perhaps the most remarkable fact connected with this table, as relates to the sexes, is the great preponderance of the males in idiopathic fevers. This being as 20.6 per cent. against 9.6 ; more than two to one. Can it be that the out-door employment of the male gives him a greater tendency to these affections, or is there something with which nature has provided woman, to ward off the poison of certain diseases, to compensate in part for the deaths through which she has to pass in affections peculiar to herself. I have noticed that *enciente* women are rarely subject to fevers of any kind. Perhaps the general phlogistic state of the system, at such times, may protect them from the inception of poison to a certain extent, and thus tend to establish the fact contained in the table.

A few deductions in relation to the particular ages at which certain diseases seem most prevalent, will close this number. Out of 1079 cases classified, 188 were under 5 years of age;

* *Error.*—More males are born.—*Ed. South. Med. & Surg. Journ.*

282 between 5 and 20, and 654 over 20. I have taken the per cent. of these cases according to the number of each class, which shows that children under five years of age are more subject to the diseases of the digestive organs, and that adults are less so than those under 20, by a considerable per cent. I think, then, it may be safely announced as a principle in medicine, that the proneness to injuries of the digestive functions becomes weaker and weaker as we advance in age. The respiratory functions are more subject to disease under 5 years than over 20, and lastly, between 5 and 20. The very young are subject to croup, hooping-cough, catarrhal fevers; the old to pneumonia and bronchitis; while the other class are comparatively exempt from all these affections.

In diseases of the brain and nervous system, adults predominate, and next, children under 5 years of age; but few between 5 and 20 ever suffer with these affections. The table further indicates rheumatism to be a disease of mature years, as none have it under 5, and more after 20 than previous to that time. In idiopathic fevers youth seems to suffer most; next, the adult, and children under 5 are nearly exempt. This is doubtless owing to the critical stage of teething through which they have to pass, which prevents them from being subject to malarious influences to a considerable extent. But why the adult should be less liable than young persons is not so easily determined, unless young people in miasmatic districts have to undergo a kind of acclimation, as foreigners, and afterwards become less subject. I have observed, that parents seldom have fever where they have lived a long time in unhealthy sections, while their children are frequently every one prostrated at once. Enquire of them, however, and you will find in former years they were equally as subject to it as their children seem to be in later days.

In urinary affections the old largely predominate, and next the very young, while those between 5 and 20 are nearly exempt. The visual organs seems to suffer more as we get older, thus: under 5, 1.0 per cent.; between 5 and 20, 1.7; over 20, 2.1. This is in accordance with nature and philosophy. The young, between 5 and 20, suffer most from the teeth. This was hardly to have been expected, particularly as the surgeon is

rarely called to operate for the first set of teeth. I think one reason for this is, that the rising generation have decidedly more causes operating to injure their teeth than the one which is now passing away. Lastly, in the exanthemata it seems the older we grow the less subject we become to this class of diseases: thus, 4.7, 6.7, 8.3 per cent. This also accords with nature and philosophy—as scarlatina, rubeola and varicella, are rarely taken but once, and in most instances under 5 or 20 years of age.

One remark, and I have done. No age in human life is exempt from disease. While the very young are free from almost every other class, the vital functions of respiration and digestion suffer to such an extent as to produce more mortality than at any other period of human existence. The youth, in the growing stage of life, seems to be subject to no special constitutional tendency to any one form of disease, like the very young and old; his functions are all in active, vigorous play. But at this very age the constitution is more liable to all those contagious and infectious diseases which, in the beautiful language of Scripture, 'walk in darkness and waste at noonday.' As we grow older, many of the functions, as the digestive, become stronger and stronger, and better able to resist disease; but then others are more vulnerable: the wasting consumption, the deadly cancer, or the terrible cardiac asthma, steals upon us, and we feel, in the language of the poet—

> 'That our hearts,
> Like muffled drums, are beating
> Funeral marches to the grave.'

The lesson it teaches us of our mortality, is too obvious for the wise not to heed its healthful instructions and solemn warnings, and the good physician should always carry about him a medicine "to minister to the mind diseased." It is not found in our apothecaries' shops, nor is it indigenous to this clime; but still it may be obtained "without money and without price." It is the Elixir of Immortality.

REPORTS FROM GEORGIA.

ARTICLL II.—SPECIAL REPORT OF AN EXTRAORDINARY CASE OF INSANITY. BY J. C. C. BLACKBURN, M.D., OF KNOXVILLE, GA.

A Strange Case of Insanity.—A lady of the village of K——, Ga., in feeble health, two years ago fell from a carriage. She received very slight bodily injury, but the fright produced a sudden and total alienation of mind. She soon became so entirely unmanageable, that I (her attending physician) advised her husband to remove her to a lunatic asylum. She being raised in the city of New York, I thought that the asylum at Bloomingdale would suit her case best. She was accordingly placed under the care of the able superintendent of that institution. She remained in the asylum till last March, when she was brought home. Her insanity continued, but it was of the least painful kind. It exhibited itself in extreme sprightliness and wit in conversation. To strangers, who had not known her disposition to have been the reverse of gayety, the observation that her spirits were too buoyant for a lady of her age, would suggest itself. With the hope that country air and scenery might prove beneficial to her, I advised her husband to remove to his plantation, a few miles in the country. They had resided on their plantation but a few weeks, when their house took fire and burned down. The terrible fright occasioned by the disaster, it was soon found, had completely restored her to her right mind. I present the above case for insertion in the pages of the *Southern Medical Reports*, because of this remarkable feature presented in the fact that a cure was effected by the *same means* which produced the disease, and that, too, after several months of alienation of mind. The lady is now a resident of this village, and in perfect health.

Knoxville, Ga., July, 1849.

REPORTS FROM GEORGIA.

ARTICLE III.—Medical scciety of the state of georgia.

We learn from the "Southern Medical and Surgical Journal," that the physicians of Georgia, to the number of eighty delegates, met in convention in the city of Macon, on the 20th of March, 1849, and proceeded to the organization of a State Medical Society under the above title. The following is a list of the officers elected:

Lewis D. Ford, M. D., *President.*
R. D. Arnold, M. D., 1*st Vice-President.*
Thomas R. Lamar, M. D., 2*d* "
J. M. Green, M. D., *Corresponding Secretary.*
C. T. Quintard, M. D., *Recording* "

Delegates were elected to the American Medical Association —a committee of five was appointed to memorialize the Legislature on the necessity of instituting a regular registration of births, deaths and marriages in the State, and the Society then adjourned, to meet again at the same place on the second Tuesday of April, 1850.

In due course of time, we hope to see some valuable reports emanate from this society. We have to regret that the anniversary meetings are to take place so late in the season, that we shall not have access to its transactions in time for our volume of the year. If any of the members or committees will favor us with copies of their reports, in advance, they will receive due consideration at our hands, and we shall be greatly obliged.

REPORTS FROM MISSISSIPPI.

ARTICLE I.—General report on the topography, meteorology and diseases of Jackson, the capital of Mississippi. By S. C. Farrar, M. D.

"Jackson, the seat of government of the State of Mississippi, is situated on the west bank of Pearl river, in latitude 32° 23′ N., longitude 90° 8′ west of Greenwich, and contains from three to four thousand inhabitants. Geologically considered, it is near that well marked boundary which separates the tertiary from the secondary formation; or, more particularly, the cretaceous beds of the latter from the Eocene marl of the former. The Spatangus, which in Europe is exclusively a cretaceous fossil, runs here through several beds of the Eocene, and is an indication of the presence of a peculiar, indurated, chalky marl. Mineralogically, our situation is pointed out by the indurated marl just spoken of, by a freestone nearly pure, of which our State Capitol is built, and by a hard, blue limestone, well characterized by the Pecten, Nummulite, &c. Beds of gravel, whose peculiar coralline impressions point to an origin from the Silurian strata of some northern locality, are broadly strewed in the environs of the city, and exposed in many ravines and artificial cuttings. Amongst these beds are many rare and beautiful Agates, Favosites, Jaspers, &c., &c., which when cut are strikingly ornamental. Beds of lignite, from four to twelve inches in thickness, make a division between strata very dissimilar, and point to aqueous action of an interesting character. These beds are undoubtedly the origin of the mineral wells (Cooper's and others) and springs in this and the surrounding counties; nor need we doubt that such wells may

be made in any part of this region, by seeking the same geological level. Their admitted value in many chronic complaints, would justify their multiplication to almost any extent: but while the lignite formation thus furnishes the materials for medicinal waters, it at the same time debars us, in the main, from pure and healthful water for culinary and other household purposes. It is in general largely charged with sulphate of iron, in a dissolved state, and bubbles of sulphuretted hydrogen, (formed, doubtless, from the decomposition of iron pyrites, which abounds in the lignite beds,) give evidence of its disagreeable character, which is fully corroborated by the taste and smell. So well understood is this fact concerning the water of this region, that our citizens, by general consent, have adopted the use of cisterns, and one or more of these are made an essential piece of property to every improved lot. The travelling geologist will be struck with the contrast presented between the geology of Jackson and that of Vicksburg and Natchez. At each of these places beds of Loess, of enormous thickness, and marked by peculiar species of Limniades, cover in the marine deposits to the depth of more than one hundred feet, while at Jackson that formation is but slightly developed. In this vicinity, the remains of Squalidæ and other fishes, which are in such beautiful preservation, lie in such a relation to the surface strata, that every collector of fossils may gather them up; while at the former places they are widely separated from the limestone quarry rock by various strata, and are only exposed at the river's edge, at low water."

The above concise observations on the geology of Jackson and its vicinity, have been politely furnished me by my friend, the Rev. A. Morris, who has devoted much time and study to the science of geology, and who published, in April and May last, a series of articles in the *Mississippian* of this place, giving a more extended and comprehensive view of the geology of this region.

For the meteorological part of this essay, I am indebted to the kindness and industry of Mr. and Mrs. Oakley, principals of the Oakland Institute of Jackson, and the young ladies of the first class of that Institution. It affords me high gratification to be able, in this public manner, to bear testimony to

their indefatigable efforts to promote the objects of science, and to say, from my knowledge of Mr. Oakley's methodical mode of business, that the register appended is substantially correct, and entitled to our highest confidence :

Extract from the Meterological Journal kept by the Young Ladies of the first class, at the Oakland Institute, Jackson, Miss. Latitude 32° 23′ longitude 90° 8′ west of Greenwich,

For the year ending December 31st, 1849.

MONTHS.	THERMOMETER.			RAIN.		WEATHER.	
	Min.	Max.	Mean for Month.	No. of days.	Depth in inches.	Clear and pleasant days.	Wet and damp days.
1849.							
January	26°	78°	51.09°	6	2.74	13	18
February	14	78	46.50	4	.69	22	6
March	33	84	65.53	4	3 55	23	8
April	30	86	54.40	6	2.69	22	8
May	56	87	72.80	13	6.89	21	10
June	66	90	77.29	4	4 57	17	13
July	68	90	77.88	21	12 20	5	26
August	71	91	80.58	12	3.28	13	18
September	52	91	74.82	2	.32	27	3
October	34	86	63.64	4	6.25	24	7
November	33	79	58.17	6	9.54	23	7
December	18	75	50.62	8	2 90	17	14
For the year			65°. 28	90	55.62	227	138

Note.—The mean height of the thermometer, is the mean of four observations daily. The "No. of days rain" includes every day on which rain fell, without regard to quantity. The "damp and unpleasant days" include many days that were only partially so.

Extract from "Observations."

January, 1849.—The rains, though frequent, were not heavy; amounting to only 2.74 inches. The winds from the north were light, while those from the south were quite warm; so that flowers began to bloom, grass to put on its livery of green, and some fruit trees to bud. Pearl River high, and the roads nearly impassible.

February.—A few of the earlier days of this month were so genial, that butterflies came out, and mocking birds began to sing. Then, on the 19th, the thermometer fell to 14°. This killed peas and many other early vegetables.

March.—Was warm, dry, and agreeable, until the 26th, when

the thermometer fell to 33° and the frost again nipped the gardner's prospects, and killed the corn of the farmer.

April—Was warm for the first thirteen days, the thermometer ranging at mid day at about 80°; then the wind changed to the north, and it grew cooler until the 16th, when there was a frost that killed cotton and corn, and seriously injured the prospects of the gardener.

May—Was unpropitious to the planter, and unpleasant to all, from the frequent rains which prevailed.

June—Gave a continuation of the showery, cloudy weather of May. The whole quantity of rain was not exceedingly great, but falling on fourteen different days, it produced much inconvenience to the planter.

July—Exceeded both May and June in the frequency and quantity of rain, so that there were only five days that might be called pleasant. The rains were accompanied by heavy, long continued thunder, and so saturated was the air with moisture that the dew point was frequently only two degrees below the temperature of the atmosphere.

August—Was exceedingly warm. There were ten days on which the thermometer rose to ninety degrees and upwards, and only three days on which it did not ascend to 85° and upwards. Though there was but little wind, gentle airs were in motion, which rendered it extremely pleasant. It was the first month of the season favorable to the interests of the planter.

September—Was generally pleasant, there were only two days upon which rain fell; yet cold, dry, north and north-easterly winds prevailed, which produced much dust and an atmosphere which was not agreeable.

October—During the first five days the weather was warm to oppressiveness. On the 6th there was a slight frost which did but little injury to vegetation. The greater part of the month the sun was undimmed by a cloud, and his radiance softened by an agreeable haziness, which gave us a climate of unsurpassed loveliness.

November—Gave a continuation of the beautiful weather of October, interspersed only by a few rainy days. There were several white frosts, but no ice; indeed tomatoes, beans, and other tender vegetables retained their verdure, and on the last day, green peas were gathered which had grown wholly unprotected.

December—The first ice, and first decidedly killing frost of the season, occurred on the 11th, when the thermometer fell to 21° and ice was formed half an inch thick. On the 31st the thermometer stood at 18°, having fallen 46° in forty-eight hours. On the 20th there was thunder and lightning with spring-like showers; on the 30th a sleet which covered the trees with ice.

The coldest day of the year was on the 18th of February, when the mean temperature of the day was 21°; the warmest on the 18th August, mean temperature 86°. The greatest quantity of rain on any one, was the 15th October—5.20 inches.

From the foregoing table and observations it will be perceived that the mean temperature of the months of June, July, August and September, 1849, was as follows:

June,	77.29°
July,	77.88
August,	80.58
September,	74.82

I will now give a short account of the prevailing diseases in and around Jackson, in the year 1833–4, and in 1848–9.

The Prevalent Diseases of Jackson and its immediate vicinity in the years 1833, '34, '48, *and* '49.

In 1833 I immigrated to Mississipi, located myself in Jackson, then an inconsiderable town, containing from one hundred and fifty to two hundred inhabitants, some of them living in houses hastily constructed and greatly deficient in comfort and convenience, as is usually the case in newly settled districts of country; for, although the legislature had, for several preceding years, convened here, but little impetus was given to improvement until 1834. In 1832, by a constitutional provision, Jackson was declared the seat of Government until 1850. At this time (1833) most of the land around the city was in forest, but little attention paid to the ravines passing through the town, quantities of mud and filth accumulated in and near them, provisions were obtained from Vicksburg, (by waggons, at great expense,) horticulture was much neglected, and but few families were plentifully supplied with vegetables. Our water for drink and culinary purposes was procured from Pearl River and

a few springs on the margins of ravines washing into the river. These springs at every freshet were submerged, and that much of the water used was impregnated with unwholesome materials will hardly be denied when we advert to the geological formation of this section of the State. 1833 and 1834 were years of unusual sickness, attended with great fatality. The cholera invaded Quebec on the 8th of June, 1832,* and thence continued its progress through the north-western and southern States, until April 1833, when it suddenly appeared in Jackson, where some fifteen or twenty cases occurred. Our then Governor, the warm-hearted and generous Scott, was one of its victims. We deem it unnecessary to describe the symptoms of the disease, as they have been so frequently and elaborately detailed by others, and as there is a striking resemblance in the symptoms wherever cholera has prevailed. The treatment was mainly that of Cartwright. For Cholerine we administered every half hour or hour until the bowels were quieted, from twenty to sixty drops of equal parts of laudanum, spts. camphor, tincture capsicum and ess. peppermint. When the more marked and decided symptoms occurred, an emetic of salt and mustard in warm water was administered, the warm bath, frictions, with dry mustard and sinapisms were resorted to, and pills composed of calomel, camphor and cayenne pepper, until bilious evacuations were procured. After the subsidence of cholera until the latter part of June, the town and neighborhood were healthy; then intermittent and remittent fevers commenced; the latter were attended with more than usual disturbance of the stomach and bowels (according to the observations of my partner, Dr. Silas Brown, who for some years had been a resident of Jackson.) It was long since remarked by that accurate observer and sagacious physician, Sydenham, "That when epidemics prevail, they impress some of their symptoms upon other diseases." Dr. Rush has confirmed this opinion; he says "that the disposition of powerful diseases to impress some of their symptoms upon weaker ones is a general law of epidemics; but not only do we find this to be the case during the prevalence of epidemics, but occasion-

* It swept off in that city in 86 days, 2,059 persons out of 5,783 cases.

ally for some months after they disappear, one or more of these symptoms seem to be impressed upon the prevailing fevers. At this period of our history, the physicians of Mississippi were not so successful in the treatment of our summer and fall fevers as at present. Several causes combined to produce this result. Slave property in the tobacco and grain growing States had greatly depreciated in value in consequence of the small remuneration derived from their labour in growing these staples." Cotton commanded high prices, lands were in demand in Mississippi; hundreds came hither, some with the view of investing their capital in the production of cotton, others for the purpose of speculating in lands, and hence numbers of the white and black population were unacclimated. This rapid influx of population enhanced the price, and made the necessaries of life scarce. We were dependent on Vicksburg for most of the corn consumed; much of it was received in a damaged condition, but so great was the scarcity, that planters were compelled to use it; and this, no doubt, may be enumerated as a prolific source of ill health in 1833 and '34. Many slaves were fed in the summer and fall months on fresh beef, in consequence of the high price of bacon and pork, and the difficulty and expense of procuring either one or the other from Vicksburg. Intemperance stalked through the land; at almost every cross road a small cabin was erected, which, in common parlance, was denominated "*a dogery.*" Indeed, judging from the habits of some, we were constrained to think that they had imbibed the poet's sentiment,—

> "That for hot or cold, for wet or dry,
> There's nothing like the oil of rye."

In addition to this, many of the old physicians retired from practice, others abandoned it to engage in the less arduous, and more attractive avocation of speculation. Young physicians flocked to the State, chiefly from the schools of Lexington and Philadelphia, thoroughly indoctrinated with the peculiar opinions as to the origin and treatment of fever, entertained by two distinguished Professors filling the chairs of the practice of medicine in those schools; hence, in the treatment of fever, the lancet was frequently unsheathed, and calomel administered

in large and repeated doses. When this failed to cure, ptyalism was resorted to; and that powerful anti-periodic, the Sampson of the materia medica in malarial fevers, quinine, was given in comparatively insignificant and feeble quantities. Up to this period, few if any had ventured to prescribe it in the heroic and jugulating doses of the present day. So far as I am informed, the credit of exhibiting quinine in twenty and thirty grain doses, in the fevers of the South, is due to Drs. Perrine and Thomas Fearn, distinguished practitioners of medicine, formerly of the state of Alabama.* In the foregoing remarks it is far from my intention to detract from the merits of the two eminent professors alluded to, or their followers. Many of the young physicians of that and the present day, in Mississippi, will compare favorably in point of talent, with a like number in any of the Southern States; my sole object has been to account if possible for the great fatality of disease at the period of which I write, and in justice to the duty I have assumed of preparing this paper, I am compelled to advert to our want of experience, and the peculiar opinions which governed us in 1833 and 1834. Since then we have become better acquainted with the pathology and treatment of Southern diseases—we resort less to the

* Since writing the above, I have been informed by my friend, Dr. Catchings, one of the members of the old Board of Medical Examiners in this State, that the late Dr. M'Pheeters, of Natchez, gave quinine in large doses at a very early period after discovery.

Note by the Editor.—We may take this occasion to inform the respected author of this report that the Dr. Perrine he has mentioned was not a practitioner of Alabama, but of the vicinity of Natchez. So early as 1823 he gave 10 grains of quinine at a dose, *without regard to the exacerbation of fever*, and with happy results, as is testified by Dr. Cartwright in his paper on the yellow fever of Natchez, published in the *Medical Recorder* of that period. Dr. Perrine published his experience in the *Philadelphia Medical Journal*, about the year 1826. If we are not mistaken, Dr. Fearn, of Huntsville, Ala., gave his first large doses of quinine in 1829 or 30. From a recent conversation with Dr. James Metcalf, who resides in the vicinity of Natchez, and is one of the oldest living practitioners of that region, we have learned that about the year 1820, he had adopted the practice of *giving large doses of quinine in the exacerbation of fever, and with the happiest effects.* Dr. M. says he taught the practice to Dr. Perrine, who lived in his neighborhood. Dr. Metcalf is now a wealthy planter of high standing, and is probably the first physician, either in America or Europe, who gave large doses of quinine in the hot stage of bilious fever, with the view to *cut short* the disease. This is what we have termed the *abortive method*, and one which we think is applicable to all the forms of *malarious* fever, including *yellow fever*. Dr. Metcalf has promised a communication on the subject, which we hope to publish in our next volume.

lancet and heavy doses of calomel. We rely more on aperients, diaphoretics, opiates, salt water enemata, cold drinks, sponging with cold water, affusions of cold water, sinapised foot baths, occasionally dry and wet cups and blisters; but above all, on the use of *quinine in sedative doses.* Since this change in practice, our intermittent and remittent fevers are more manageable, and even that terrible disease, *algid malignant intermittent* or congestive fever, has lost much of the horror it formerly inspired, and is far less intractable. But we are also exempt from many of the corroding cares and anxieties of 1833 and 1834, those years of speculation, when we were buoyed up one day with the expectation of riches by some lucky turn in the wheel of fortune, and the next, depressed by blighted hopes and ruined prospects. Now we enjoy more composure, we are better lodged and fed than formerly; our bodies are invigorated by labor and exercise; our supply of food is abundant, varied and wholesome; we are not constantly *upon the alert* for persons to victimise by bargain and trade; the days of banks and chimerical prospects have passed by, and now, *with few exceptions*, our citizens look not to lucky speculations nor to the placers of California, but to the bowels of our own soil, for gold. Most of the liquor-shops have been abandoned, demolished or converted to other purposes; and in every hamlet and town of the state, the Sons of Temperance have unfurled their banner, bearing on its ample folds the motto "*love, purity and fidelity.*" They visit the habitations of the intemperate, carrying in their bosoms the feelings and sympathies of the good Samaritan, and on their tongues the language of love, and hope and consolation. They admonish, they entreat the intemperate to abandon their habits, and flee the path that leads to ruin, disgrace, disease and death. Their friendly counsels make a deep impression, and frequently the inebriate is reclaimed, and goes forth again into society, with the sentiments, and aspirations and dignity of man. Now, acclimation, good food, pure water, exercise and temperance all contribute to render us less liable to disease; and when it comes, the system responds more readily to medicine.

Having rapidly glanced at some of the probable causes of disease in 1833 and '34, I hasten to give a succinct account of

those in 1848 and 1849. The reader will perceive that I pass over the years that intervene. In 1834 I moved to an adjoining county and remained there until December, '47, when I again located in Jackson.*

In January 1848 the measles appeared, and prevailed for some weeks as an epidemic. Many infant children fell victims to it, in consequence of those two accidental complications, diarrhea and acute bronchitis, which usually give to measles a dangerous aspect and fatal termination. The treatment adopted was that recommended in modern standard

* Perhaps the Editor may supply the vacuum, as he resided part of the time in Clinton, then a flourishing village, only ten miles from Jackson.

Note, by the Editor.—I resided in Clinton from 1833 to 1841. It was considerably larger and a more flourishing town than Jackson during the first four years of this time. Clinton has since become almost a "deserted village," whilst Jackson has grown to considerable importance, and is now one of the prettiest towns in the south. During the years 1834, '35, '36, '37, the immigration into Hinds County was very great, and the lands were rapidly changed from a *state of nature* into numerous and extensive plantations. The clearing of so much new land and the great influx of unacclimated people, white and black, was accompanied by an extraordinary prevalence of endemical diseases, such as intermittent, remittent and congestive fevers, dysentery, diarrhea and cholera morbus. It was there that I first became familiar with that terrific type of malarious fever, *the congestive*, which consigned thousands of victims to their final doom. Amidst the rapid immigration, there was an influx of young and inexperienced physicians, fresh from the Medical Colleges, where they had been taught everything better than the nature and treatment of the very diseases they were to encounter. The consequence was, they sacrificed their own lives in great numbers whilst striving to stay the hand of death among their fellow citizens with a devotion worthy of a better fate. The collapse stage of congestive fever at that time, was attended with coldness of the surface, pulselessness and watery diarrhea, very much like the collapse of Asiatic Cholera. The most successful treatment in this stage consisted of blisters and sinapisms, with small and repeated doses of calomel, camphor, Dover's powder and quinine. We had not then learned to give quinine in large doses, or we might have saved many who now sleep in their untimely graves. The experienced physicians of that day, (amongst whom may be mentioned the late Dr. J. B. Morgan, and Dr. George Perrin, now of Green Co. Alabama,) had acquired considerable skill in the treatment of the prevailing fevers, but not equal to that which is attained at the present time. The best practitioners of the south now very rarely lose a case of remittent or congestive fever, if called in proper time, and their directions are obeyed. In 1837 there commenced in this section of country one of the most remarkable revolutions ever witnessed. For four years the wildest mania for *speculation* had pervaded the entire community; but now the inflated bubble burst and spread general ruin among the holders of property. From this time there was a complete check to all improvement—no more new fields were opened, and a great many were deserted. The *emigration* was now almost as rapid as the *immigration* had been. In a medical point of view the most remarkable result was the almost complete cessation of endemic diseases up to 1841, when I left the State.

works—for the diarrhea I occasionally prescribed (and I thought with benefit) the sulphuret of potass in baths, with the view of exciting the surface and restoring the function of the skin. These baths, says Dr. Gerhard, are in high repute at the *Hopital des Enfans Malades.* In February we were visited by Erysipelatous fever, (the "*black tongue*" of some writers.) I saw six cases, all among adults, but one; in the two first, the inflammation was located on the head, face and throat; the third on the axilla and pectoral muscle, producing suppuration; the fourth occurred in a slave, over the latissimus dorsi; this case also suppurated. Although I made free incissions, large quantities of cellular substance sloughed out, presenting that peculiar appearance described by authors. The fifth was a small mulatto girl—hers commenced in the foot and rapidly spread above the knee joint, where it was arrested by the application of a blister around the lower part of the thigh and by the use of calomel and tartar emetic in purgative and diaphoretic doses, with aperients, and subsequently quinine. The sixth was that of the lamented Dr. Wm. Gist, a popular physician of Jackson, cut off in the meridian of life and usefulness. He was a man of noble impulses and of enlarged philanthrophy. Wherever professional duty called, thither he went; and with no less alacrity to the habitations of the poor than the mansions of the rich. Of him it may be truly said—

> "To relieve the wretched was his pride,
> And e'en his failings leaned to virtue's side."

The disease in his case located on the axilla, the shoulder, pectoral muscles, and ultimately on the lungs. Under a mistaken view of his disease and contrary to the advice and in the absence of his medical attendant, he took cathartic medicines which prostrated the system and brought on a state of asthenia, which neither the skill nor assiduous attention of his physician (a gentleman who stands at the head of the profession in Jackson) could counteract.

The first and most graphic description of epidemic erysipelatous fever that met my eye, was that published in the "New York Medical and Physical Journal," (July, August and September,) in the year 1825, by Dr. James Fountaine. Since

then it has been described in the Northern journals by Doctors Hoel, Dexter, and Allen, and in the "New Orleans Medical Journal," by Drs. Puckett, Lovelace, and Wharton. To these papers the reader is referred for a detailed history of its pathology and treatment. I will barely remark, that wherever the disease has prevailed, it has evinced a decided tendency to the typhoid character. Drs. Sutton and Wharton used the lancet, when called to patients in the very incipiency of attack. Drs. Puckett and Lovelace used it sparingly, and Dr. Fountaine abstained from its use in every case, and conducted the treatment, in the early stage, by emetics and diaphoretics; and at a subsequent period, when the powers of life began to flag, with ammonia and spts. turpentine. From the little experience I have had in this disease, I am inclined to the opinion, that patients laboring under it will not bear much depletion either by the lancet or purgatives. The safest practice seems to be the exhibition of emetics, diaphoretics, and subsequently cordials and stimulants. Free incisions should be made, where there is a tendency to suppuration, or after it has occurred, with the use of various gargles for the throat, when that is implicated, viz., the salt, pepper and vinegar gargles, or a little creosote in water; when these fail, the lunar caustic.

The spring, summer and fall months of this year were remarkably healthy; we had a few cases of intermittent and remittent fever, but they yielded readily to the use of blue mass, quinine and diaphoretics. In the winter of 1848, when cholera prevailed in New Orleans and on the Mississippi River, a number of our citizens suffered from cholerine, and we had a few violent cases of cholera morbus; but I saw no case of genuine cholera. For cholerine I prescribed the following compound:

℞ Tinct. Opii.
" Capsici.
" Camph.
Ess. Minth. pip. ā ā ʒii. to iii. M.

Dose, twenty to sixty drops every half hour or hour, according to circumstances. After relieving the bowels with this, I directed calomel and Dover's powder; or blue mass and Do-

ver's powder, with a little pulv. camphor, in repeated doses, until the liver was acted upon, which generally completed the cure. In the early part of the spring I saw a few cases of pneumonia, which were treated by the lancet, tartar emetic, and quinine—the latter in liberal doses. In this climate, a stage will usually be seen in pneumonia, when the quinine may be used with freedom and efficiency, which for some years past has been my experience; and on conversing with professional friends, whose skill and acumen entitle their opinions to respect and confidence, I am pleased to find a coincidence of our views. In May, June and July, large quantities of rain fell; in the latter month, it rained more or less for twenty-one days. The mean temperature of this month (July) was 77° 88′.

Pearl river overflowed its banks, an unusual occurrence at this season of the year. When the water receded, scarcely a family in the immediate vicinity of the river escaped intermittent fever; the disease invaded many of these families simultaneously; it yielded, however, readily to our usual remedies. I generally prescribed from 8 to 10 grs. blue mass at night, with directions to commence with the quinine as soon as the sweating stage was fully established, and continue it in doses of from 2 to 5 grs. every two hours, until the next period for chill was past; then to exhibit for several mornings in succession, from three to five grains. Frequently I directed blue mass 12 grs., quinine 24 grs., to be made into twelve pills, one to be given every two hours, commencing at the termination of the sweating stage, until the whole number was exhibited. If the blue mass failed to act on the bowels it was aided by mild aperients, such as rhubarb and magnesia combined, sulph. magnesia, oil, or senna and manna with a little Epsom salts. In nine cases out of ten this practice succeeded. Some cases of bilious remittent occurred, but they were marked by no unusual symptoms. Dover's powder and calomel at night, with rhubarb or sulph. magnesia next morning, or blue mass at night with rhubarb and ipecac. equal parts of the two former (from 8 to 10 grs.) with one or two of the latter, and quinine in large doses during the remission, generally subdued the disease. I saw but one case of algid fever; it occurred in an aged servant, who suffered two chills to occur before I was

called to her assistance. I found her in a state of congestion, from which the system never recovered. At some future period it is my intention to give you my views of fever, with the history and treatment of a few cases of congestive fever. Having extended this paper much more than I intended when I commenced it, I will conclude by reiterating a remark heretofore made by others, that no disease is more disposed than tertian intermittent to present anomalous symptoms, or to appear with a portion of the livery of other diseases. Cleghorn, in his work on the diseases of Minorca, remarks, "that about the time when tertian intermittents begin, the cholera morbus, rash and essere become frequent and epidemical, in a less degree, diarrheas, dysenteries and tenesmus, likewise make their appearance as epidemics in summer and autumn; but some years they occur so seldom as scarce to deserve the name, while in others they are almost as numerous as the tertians themselves; there seems likewise to be a *near alliance amongst all the diseases abovementioned.* Those who have the rash or essere to a great degree are very liable to tertian fevers. On the other hand, in the progress of tertians these cutaneous eruptions are apt to break out; the cholera morbus sometimes has its regular periods, like a tertian, as the paroxysms of tertians are frequently attended with a cholera. Sometimes a tertian is changed into a dysentery, or a dysentery becomes a tertian, and when one of these diseases is suppressed, the other often ensues; nor is it uncommon for dysenteric fevers to put on the form of tertians, and for the fits of tertians to be regularly accompanied by gripes and stools. Again, sometimes tertian intermittents are complicated with fixed pains of the head, breast, belly, back or limbs, so as to personate with great exactness a phrensy, pleurisy, hepatitis, lumbago or rheumatism; especially if the apyrexies are obscure or imperfect. Sometimes one or two symptoms of the fit predominate with such violence that the rest are obscured or altogether eclipsed; hence we so frequently meet with hemicranias, choleras, dysenteries, &c., returning regularly at stated periods. Again, there is another circumstance which renders the subject still more perplexing, for such is the variable disposition of these diseases that they often change from one appearance to an-

other, and seldom retain the same form from their beginning to their termination, each period sometimes assuming a new type, and every paroxysm being attended with different symptoms." But we should ever bear in mind that the fevers of the United States "are essentially periodical, and if we would treat them successfully, the doctrine of periodicity must never be forgotten."* In its onset or during its continuance, I have seen intermittent fever invade almost every part or organ of the body; often it commences with severe pain over the brow, constituting the brow ague of some writers; occasionally the breast, heart, liver, kidneys, bowels, thighs and legs are the seats of severe pain, all of which may occur at irregular periods, and will be relieved by mild mercurial carthartics, and then quinine and morphine in liberal doses. These anomalies are adverted to, not because they are novel to those accustomed to treat malarious fevers, but for the benefit of the inexperienced.

REPORTS FROM MISSISSIPPI.

ARTICLE II.—REPORT ON EPIDEMIC CHOLERA, IN THE VICINITY OF NATCHEZ.—BY C. H. STONE, M. D.

NATCHEZ, January 7, 1850.

DR. E. D. FENNER:

Dear Sir.—In complying with your request to furnish an account of cholera as it appeared in this section, I propose to state the time at which the first cases occurred here, and as far as I can, at other points. A comparison of the different reports will no doubt show *the almost simultaneous formation of the cholera poison throughout a great, if not the whole, extent of the valley of the lower Mississippi;* not travelling *up* the river from New Orleans, nor *down* from Memphis or Vicksburgh, but like a vast,

* Professor T. D. Mitchell.

dread pall, impending over this great valley, and settling here and there, first on its heart and great trunk, then its numerous rivers, lakes, and extensive plains, shrouding thousands upon thousands in death.

Leaving out of view the cases from the "Swanton," (Dec. 12th and 13th,) you have shown in a publication of the 28th, January, 1849, the period of the first deaths among residents of New Orleans, from cholera, to have been on the 13th December; though you express the opinion, that for some days previous to the 5th December, "the epidemic influence of cholera was gradually being matured and developed in our (your) midst." The number of deaths steadily increased from the 15th to the 23d December, when the disease was declared to be epidemic by the Board of Health; and you state that "it raged most severely from the 22d to the 30th."

On the 23d December, 1848, I was called to see Hiram Baldwin, who had been attacked on the 20th, on his way from Vicksburgh, on a flat-boat. He was just verging into the pulseless stage of cholera. Of the character of his attack there can be *no* mistake, or doubt. On the 6th and 7th Jan., two cases occurred in my practice *on the hill*, in this city; on the 3d, 4th and 5th, a case each day, and a few more soon after, *under the hill*, among flat-boat men living comfortably in their boats. During the latter part of January, all February, and a part of March, fever cases were heard of; but about the 15th of the latter month, five cases (all residents) occurred within a week, and within a space of fifty yards, near the ferry landing. Occasional cases continued to be seen during the spring and through June.

But to return to cases showing the beginning of the *cholera diathesis*, if it be allowable so to extend the use of that term. Mr. M. E. Saunders lives six miles from the river, in Wilkinson county, in this State, thirty-five miles south of Natchez, on an elevated section of country: he informs me, that a case of cholera occurred on his place on the 27th, and another on the 28th December, 1848; the first patient lived about fourteen hours, the other a shorter time. The disease spread rapidly among his negroes; thirty cases and five deaths within ten days, when it ceased.

Mr. J. M. M'Gill informs me, that from about the 20th Dec. to the close of the year 1848, an obstinate diarrhea (without fever and with clean tongue) prevailed among the negroes on the island plantation belonging to the estate of J. M'Gill, situated on lake Bruin, parish of Tensas, La. The steamboat landing is four miles from the negro quarter, which is two and a half miles from the Mississippi River, in a direct line. There were fifteen or twenty cases, and they did not yield to the remedies which he had usually found successful in this form of disease, yet none were fatal. He was informed that a similar disease prevailed on several plantations in the neighborhood, (about 50 miles north of Natchez.) From the 1st to the 16th Jan. 1849, the negroes were healthy, when a case of cholera occurred, proving fatal within 8 hours; on the 17th five cases occurred, of which two died within six and seven hours, two within two days, and the fifth recovered. The negroes on another plantation belonging to the same estate, (and, of course, subject to the same management,) but on the opposite side of the lake, which is one mile wide, entirely escaped the diarrhea, but were attacked with cholera within about two weeks of its onset on the island place. On the evening of the 15th Jan. "some plantation supplies, bagging, rope, and hardware," were landed from a steamboat, and a part hauled to each place on the same evening.

Mr. R. D. Percy lives about 15 miles, in direct line, from the Mississippi River, and 4 miles from the mouth of the Tensas, which empties into Black River, and this into Red River. A steamboat having cholera on board, as he was informed, landed freight at this place, about the 23d Dec. 1848. Mr. P. and one of his negroes went on board; he was attacked with diarrhea that night, and the negro soon after, which continued many days with both, and proved fatal to the latter on the 1st Jan. presenting, at its termination, the usual appearance of cholera. On the 2d and 3d of Jan. two children died of cholera quickly after the attack; and during this month, there were daily on the list about 15 cases of diarrhea or cholera, as each may choose to call it.

Diarrhea never prevails on the plantations as an epidemic during the winter and early in spring: yet in that period of 1848

and '9, it was very common throughout the valley. Few, I think, will doubt its cause to have been the same as that producing cholera, *fatal cholera*, though in a less concentrated degree. The cholera tendency existed, and it was wise to treat this profluvia as cholera, and dangerous to neglect it as a common diarrhea, for then it was too often fatal, with the more distinguishing symptoms of cholera present. Those who had the diarrhea on the M'Gill place escaped an attack of cholera, with one or two exceptions, if any, and those of the mildest form of the disease.

Dr. Shanks, in the July number of the *American Journal of the Medical Sciences for* 1849, shows the time at which the disease appeared at Memphis. The first case he notes is that of a boy 16 years old, who died of *cholera* on the 22d Dec., after several days *diarrhea*, which assumed an intense form on the night of the 21st. Several days of diarrhea would date the case back to the 18th or 19th. The two next cases were on the 26th ; one died on the 29th, the other on the 30th. Like the boy, "deceived by the insidious progress of the disease," they also passed into collapse and died about the same time after attack of diarrhea, or more properly of cholera, as Dr. S. seems to consider it. "On the 30th, 6 deaths occurred, 4 among the flatboat population, and 2 who had arrived from New Orleans a few days previously, and by the 1st of January, a considerable number of cases and several deaths occurred at different points, from one end of the landing to the other, (two miles,) under circumstances that rendered it impossible for the disease to have spread by actual contact, as the cases were too remote from each other; and most of the subjects of them had neither been on an infected boat, nor in immediate contact with a case of cholera"—"and one or two died at the upper part of the landing, a mile above town, who had never been either down to the lower landing or in town." And besides these cases of cholera along the line of the river, a death from cholera occurred in town, remote from the landing, on the 31st Dec., the attack being on the 30th.

Natchez is within 24 hours (280 miles) of New Orleans, Memphis is within 4 days or about 800 miles; "the channel along which steamboats daily passed" is as near the landing at Natchez as at Memphis. Cholera prevailed considerably at the latter, but to a slight extent at the former place. It may be said

that Natchez was *protected* by quarantine; but that was only ordered and published; it was never enforced beyond a few hours, if for one. And, in fact, we are still under the same quarantine; for the ordinance establishing it has never been repealed. One hundred deaths were supposed to have occurred at Memphis; about 25 here. How far our quarantine was useful I need not ask.

It would be as reasonable to attribute the outbreak of cholera on the McGill Island plantation, on the 16th, to a boat having landed "bagging, rope and hardware," four miles distant, and part being hauled there on the 15th, as to assign the attacks of Mr. Percy and his servant, and the prevalence of the disease on his place, from the 2d of January, to an infection received from the boat. They were mere coincidences; with the cholera tendency pervading so extensive a region, and the almost constant communication with steamboats, it would be strange indeed if such were not frequent. Two events closely following each other in time, are too often viewed in the light of cause and effect, from which results much error and perpetuation of error in medicine.

Colonel A. L. Bingamon's plantation is three miles east of Natchez, on an elevated locality. The St. Catharine, a deep creek, runs through his as through fifty or more places, having extensive bottoms, liable to overflow, but cultivated or grazed. While cases of cholera were only occasionally seen and but little heard of in the city, or elsewhere near, this disease began and prevailed on this place as an epidemic, during about 33 days, beginning in June and ending July 12th, 1849. Among 239 negroes, 129 were attacked, of whom 14 grown ones and 9 children died. Col. B. had an attack on the 5th June—an attack of *yellow*, *liquid purging*, giving him no feeling of sickness for hours; but his discharges suddenly becoming less yellow, more copious and frequent, and projected with violence—being followed also by vomiting, intense thirst, and cramps, he was soon prostrated into a condition of great distress and restlessness. The pulse, previously free and open, began to flag, the face to become pale, and the tongue cool; copious sweats broke out and dried up; the body was giving way, but the mind retained its

tone. He was approaching *collapse*, but a *cholera* treatment of his case, by calomel, opium, red pepper, creosote, camphor water, ice and sinapisms, arrested the disease, which afterwards I called cholera *morbus*, but on which I told him, and he *knew*, would soon have supervened the collapse of *cholera*, without the *morbus*.

The epidemic began mildly as a diarrhea, but on the 13th a severe and rapid case occurred, and was in collapse before brought to the hospital from the place of his work, (2½ miles.) Soon, cases of severity were frequent, and the epidemic continued of the same grade of violence, till suddenly it disappeared; four cases of extreme severity taking place on the third day before its cessation, two on the second, and one milder on the last. There were cases of nearly all grades, from those of one or two days moderate sickness, to others terminating in death within four hours from *first* symptom of disease. The cholera condition was plainly apparent in the sunken eyes, the voice, frequent pulse and shrivelled, lifeless-feeling skin of a child, 4 years old, who had previously had no discharges from stomach, bowels or skin; the same occurred with a robust man, who had only vomited once. A child was found pulseless within ten minutes from the first and only alvine discharge, and died in four hours; nothing that was done for its relief having the least effect. The same loss of pulse took place with a man, after one discharge, and he died in ten hours. Cases went rapidly into collapse, if not quickly treated; and even those who appeared moderately affected, rapidly verged to this condition, when the attention was drawn to others apparently more severely attacked and the repetition of remedies thereby too long omitted.

The pulse was, in nearly all severe cases weak, and increased in frequency—in some, not much above the natural number, especially after the first turmoil from the attack was overcome, such as resulted from fatigue of coming to the hospital, fear, &c. In cases of a milder grade, it was open, of good strength, and natural, though sometimes of increased frequency; it was not found slower than in health in any case.

I witnessed the throbbing, hemorrhagic pulse, in a few cases, during January, under the hill at Natchez. It was then expanded, and these cases were very manageable; none such, however, were seen at Col. B.'s, nor with negroes at any place.

I desire not to occupy your time by enumerating symptoms; yet I could not avoid referring to the pulse, which is so varied in cholera—or it may be, so uniform in one section of country, or grade of the disease, and so different in others. Nor can I omit to state, that in many cases up to, and in a few after, the stage of collapse, I have observed the stools to be of a *yellow* or *greenish*, watery fluid; and in one, the biliary secretion continued till death. But however free the biliary secretion might be, the serous hemorrhage was predominant, and by its continuance caused the suspension of the former, with rare exception.

I observed this not at Bingamon's, except with himself; but in the city, where the disease was more gradual in arriving at its acme. At his place the poison was more concentrated, the secretions were suspended, and the exudations more profuse. In the few whose *first* discharges I saw, these were pale, ashy, lifeless, while still fæcal. Neither can I omit to mention, that I saw none in the "blue stage;" the color of the skin (I speak of white persons) was brown on the face, neck, hands and feet, in what I suppose is *called* the blue stage. Did you ever see one blue?

The robust fell victims to the disease in as short time as the feeble and sickly. A few had attacks of fever preceding the cholera; the latter making its onset *during* the fever in one case, and *after* its cure in two others. A few cases of dysentery, also, were seen while the cholera was prevalent.

Three children had ulceration of the cornea as an effect of the disease. It showed itself, first, by white spots, which became deep ulcerations. An eye of one was nearly destroyed before the ulceration was detected, and was the cause of death. With the others, the ulceration was detected early, and cured by the use of nitrate of silver in solid and liquid form.* I observed no other sequelæ except two cases of dropsy, chiefly in the legs. The function of nutrition received a shock which rendered the recovery difficult and slow in many, and in one case was the cause of death, twelve or fourteen days after recovery from the cholera state. Despite the most nourishing food and every effort, death took place by a *consuming* process, with the secretions of the liver and kidneys restored, and without fever.

The following comprises the treatment pursued during the epi-

* Similar and other effects of cholera on the eye, are noted at p. 447, Vol. XIX. (Oct., 1833) of the Med. Chir. Rev.

demic at Col. Bingamon's. As soon as attacked in the field, one, or two, or three potions of a mixture of laudanum, spts. camphor and tinct. assafœtida, in equal parts, were given; the proportion of laudanum was greatly reduced as soon as it was found that much complaint was made of the head, and red pepper was also added.

Upon arrival at the hospital, the patient was enveloped in blankets, a large sinapism applied to the abdomen, and the feet kept for half an hour in a red-peper or mustard bath; as quickly as possible, a dose of mixture, in liquid form, was given, so that the patient should take, according to age or severity of attack;—

Of creosote, in full solution, from 1 to 3 or 4 drops;
" capsicum, in powder, from 3 to 6 or 10 grains;
" camphor, in watery solution, from 3 to 6 or 10 grains;
" bicarb. soda, from 3 to 6 or 10 grains.

To which laudanum was sometimes added in moderate quality; or, if there was great pain in the bowels, in a dose of of 25 or 40 drops. The dose of the preceding mixture was repeated every 15, 20, 30 or 60 minutes, till a decided impression was made; also from 10 to 20 grains of calomel were added, or given by itself, every hour for three or four doses. I preferred frequent repetitions to a portion which might prove more than was necessary or proper. Ice, pounded, was given as freely as the patient desired it, but water or other fluids were sparingly allowed. Cold (sometimes iced) tar-water was thrown into the bowels in very many cases; in others, tar-water with beef soup, half and half. It was used both early and late, in attacks of much and little severity, and seldom without such advantage as proved it to be a useful adjunct in the treatment. And tar-water or soup were in some cases, and at various stages, made the vehicle for laudanum, whiskey, quinine, tannin, sulphuric ether, turpentine, given by enema, either each separately, or some combined, (quinine and tannin however not combined.)

Liquid nourishment (beef tea or chicken-water, gruel or rice water,) was given at as early a period as the stomach would retain it, or as it was not nauseous to the patient. But few doses of capsicum could be administered; the period for its GREAT utility in the disease soon passed; for either in collapse, or in decided improvement, the patients almost universally complained of its burning the stomach. The ice was valuable, both as counteracting this effect, and a remedy for the disease. No unpleasant

sensation in the stomach was complained of from the creosote, (in solution in water, or in camphor water, and in reduced quantity,) when continued, as it was, after these periods. It allayed nausea or vomiting more promptly than any other remedy used. But a period soon approached when nitric acid (5 to 10 drops in a tumbler of water, and this quantity taken in several draughts, at short intervals) was very serviceable and grateful to the sick. It enabled the stomach to retain more water—an important remedy itself as soon as it *could* be retained—it allayed the tormenting thirst more readily than water alone, and maintained the tone of the stomach and bowels. And patients begged even more earnestly for this acid, than for the discontinuance of capsicum, after the stages referred to, though before it had been grateful. I soon began to give the acid at earlier periods; and have to regret that I was not, at the commencement, aware of its *great* utility in the disease; for so entirely compatible is it with all the remedies I used, the soda excepted, and so beneficial that I shall in future, resort to it at earlier periods, holding fast to the others also, with the one exception, the soda.

I applied sinapisms repeatedly to various parts of the body;—discontinued frictions as useless in intense cases, and in the milder without a degree of benefit compensating for the fatigue to patient and nurses. I found that tight bandages subdued the cramps more readily, and in some cases afforded prompt relief.

A time arrived when nothing but camphor-water seemed proper. I used it extensively and always avoided the camphor in powder; and after nothing was proper to enter the stomach but nourishment and ice. It is an important matter to bear in mind, that too much may be attempted. But, though this be true, I had occasion, as I thought, to repeat the calomel in small doses, and to bring quinine in aid to sustain the system; the latter was useful in such cases as did not maintain the tone given by the preceding remedies. It was at first given by enema, 10 to 20 grs.; afterwards I gave from 5 to 10 grs. by mouth, I gave more at a *very* early period of attack, though I can readily believe it a good remedy.

It has been well impressed on my mind that there is no ONE remedy for cholera; and equally so, that there are several, under the combined or consecutive use of which, much may be successfully done. I neither went into, nor came out of the contest, with the vain glorious idea that I could be, or had been victori-

ous. The result of the preceding treatment was better than I had expected to obtain in treating *severe epidemic cholera.* It *prevented* many cases, just verging into collapse, from going into that stage:—and by this I mean the *pulseless* collapse. All the other signs of collapse were present in many who recovered; but alas! I must admit that only ONE recovered who became fully pulseless; and this one, I do not pretend to have cured: it got well, or rather came out of the pulseless collapse, by the mere power of nature; since the same means failed in all other cases appearing as hopeless as this.

I bled a stout negro having been several hours in pulseless collapse, into which he had gone suddenly while two and a half miles distant from home. Blood was obtained, after great effort, in sufficient quantity to afford some relief to his distress. It became much lighter colored, yet the pulse was not restored. Violent vomiting was induced by a mustard and salt-water emetic, and by a feather applied to the fauces, when the pulse returned and remained distinct for two hours; yet he died within as many more. I bled the child which had become pulseless, without previous discharges, without the least good effect. A few were bled at the onset. The loss of blood was serviceable to two or three, and perhaps it saved one. I thought it injurious to others and abandoned it as inapplicable to this epidemic. I had been favorably impressed, by my readings, respecting bleeding when the patient was going, or had gone, suddenly into collapse; that is, without much waste by the drain from the bowels. And in other grades of cholera, or in the hands of others, it may be an invaluable aid; but with the nervous system *profoundly shocked,* I would not resort to it again with the negro race, by whom evacuations of any kind are not well borne.

In one case, pulseless and cold, I tried the cold dash, and rolled the body in blankets after each affusion of two buckets full of cold water, one down the back, the other in front; the pulse returned twice, and the skin was less cold; but at the third trial of fifteen or twenty minutes interval, no good effect was obtained.

I endeavored to make several expand the chest by an effort of the will, as I thought much of the good effect of the dash, had resulte l from the deep inspiration it forced, and because of the importance of attending to this remedial means in cases recovering from asphyxia.

I wet the abdomen of another with alcohol; applied a torch, and immediately smothering the flame, made a strong impression on the nervous system; had a speedy counter-irritation, but no reactive effect.

I omitted few modes advised for the stage of collapse. To some I gave salt and mustard, and ipecac emetics; allowed and urged cold water, gave calomel largely—or caused to be injected some of the various remedies previously referred to; but in the pulseless stage I failed with everything—the pulse returned in a few instances, but not to remain.

Dr. Cartwright's powder of capsicum, camphor, hydr. cum creta, charcoal and gum arabic, was given to one case within an hour of attack, and was thrown up three times successively, at which period the patient became pulseless.

In conclusion, allow me to say that I have, for many years, used creosote, generally in solution, and greatly to my satisfaction, in the serous and mucous discharges from the stomach and bowels, in cases unattended by an *inflammatory* irritation, whether of adults or children; but at no time so frequently and with such marked good effect as during the prevalence of the cholera diathesis.

The first or acute stage of intestinal irritation, whether called diarrhea or cholera infantum, having declined, it often acts happily by modifying the action, arresting the discharges, and giving tone and thereby permanency of relief. In more chronic cases, with free secretion of mucus, few if any remedies are more valuable, and none so mild as this may be in *solution;* but in *pill* it may prove a violent irritant. And in similar states of the mucous membrane of the lungs, where it is often safe and necessary to moderate and gradually check the inordinate secretion of mucus, creosote is highly valuable.

But in cholera, where there is loss of tone from the beginning, there is no inflammatory action to forbid its use, and it is an important remedy to aid in suppressing the serous exudations and the mucous secretions, and also in arresting the vomiting.

From about August the reverse condition of the bowels, constipation, existed here and in the city, and was nearly as conspicuous, as previously the tendency to and *facility* of purging had been. After that period I had several cases of hepatic ileus, or "dry belly-ache" of the old West Indian authors.

Besides this we had prickly heat more extensively than I have ever known; and also an extensive and unsightly eruption of boils, or more properly speaking, of *carbuncles*, using this term in its medical, not in its surgical sense. The former was a *protection*, to some extent, and the latter to a much greater—indeed I have seldom known a more general exemption from fevers and visceral engorgements than when the carbuncular eruption was most prevalent, either in the city or on plantations. I attribute it mainly to there being removed from the system by this suppurative action of the skin, certain vitiated materials, which the depurating organs (the liver, kidneys, and skin as such) failed to eliminate, or which were thrown back into the system in consequence of a derangement in the hepatic function, not a failure of secretion, but an impaired power of *excretion*.

It was a tedious and offensive mode of relief which nature adopted, if I may be allowed to say, in this age of *homœopathic wonders*, that nature has *any* curative power. A failure to afford relief, in one instance, caused me to witness a highly interesting case. In this, a child, there was considerable fever, delirium, a sallow, thickened skin and yellowish eyes; the carbuncles failed to maturate well and did not discharge, but receded partially, leaving dark spots. From the liver and kidneys were discharged scanty, vitiated secretions; and when these were more freely induced, they became excessively offensive, the urine especially, and the patient gradually so much improved as to promise recovery; but an attack of influenza, then prevalent, supervened, and in its critical condition destroyed it.

The incisions made in the carbuncles gave vent to a small quantity of bloody pus; while thin, black blood continued to ooze from them, and exuded from a blistered surface before death.

In conclusion, a second time and finally, permit me to express the hope, that since the second epidemic of cholera, physicians will see the error in the books respecting the disease called *suppression* of urine, or at least of all those cases included under this term, in which are described—first, a fever, then a slow pulse, for a while an absence of apparently dangerous illness, sometimes with discharges from the stomach, bowels, or skin, of a fluid with urinous odor, the same being found also in the ventricles of the brain; and coma supervening, death taking place with certainty, and sometimes within a shorter time than happens in some cases

of cholera. In none of the latter have such symptoms been observed.

Two totally opposite conditions of the kidneys and their secretion are described as suppression of urine; one of a true suspension or suppression of the secretion, from which the system suffers but little for days, weeks, and months, and at times in some cases none at all, if there be truth in the few cases that have been reported; and another of *continued* secretion and *absorption* from the kidneys, from which always results one of the most fatal forms of disease. The same is true of the liver, with such modification as is due to its performing a double function, and to its secretion being generally bland and little injurious, while, sometimes also, it is so vitiated as to be, when absorbed and not speedily eliminated. as poisonous to the blood and depressing to the nerves, as urine of *whatever* quality, *always* must be.

Yours very truly,

C. H. STONE.

REPORTS FROM MISSISSIPPI.

ARTICLE III.—ON EPIDEMIC CHOLERA AND ITS PREVENTIVE TREATMENT.—BY C. S. MAGOUN, M. D., OF NATCHEZ.

E. D. Fenner, M. D.

Dear Sir,—In compliance with your request, I now proceed to give you a crude essay upon the subject of epidemic cholera, as observed in this vicinity. Cholera, in its epidemic form, did not visit our city; there were only some sporadic cases, and generally curable. For several weeks during the months of April and May there was a strong tendency to cholera symptoms. Considerable modification in the dietetic habits of the people had to be made to avoid a derangement of the bowels. Some time in

the month of April, I furnished for publication in the Concordia Intelligencer, an article on "*cholera prevention*," and among other things, advised the constant use of *tar-water* among the negroes on the plantations. This article was pretty extensively used as directed, and so far as I can learn, no place suffered seriously or had cholera epidemically, when it was properly used. Independently of its therapeutic action, it prevented the excessive use of water, and consequently the enervating effects of deluging the stomach, during excessive heat or great thirst, with that fluid.

The first plantation to which I was called, where cholera was prevailing epidemically and in great malignity, was at "*Rifle Point*," nine miles up the river, and on the west bank. This is a large, well improved and healthy place, containing about one hundred and fifty souls.

My first visit was on Monday, June 25th, about 9 o'clock, P. M. Was told there had been eight deaths during the preceding four or five days—that Dr. Gegan of Vidalia was first called, who was soon taken sick and left. From this attack he did not recover, but fell a martyr to his profession. He was an excellent physician and generally esteemed.

Dr. Gegan was succeeded by Dr. Brickell, who was in the neighborhood and recently from New Orleans; I have not the pleasure of his acquaintance. He was taken sick on the day I was called, and had left before my arrival. He had been on the place several days. I found the overseer *in articulo mortis*, having been taken the same day, about 9 o'clock, A.M., while in the field. He expired in a few minutes after my arrival. Also one little negro was in collapse, and died in two or three hours; the treatment or history of the case I know nothing of. Two male nurses accompanied me to the place, and a young man, an entire stranger on the place, had arrived just before us, to take the place of overseer. Thus we were without any one to give us any information as to the treatment or history of the cases on hand. I had to take them as I found them, without any information to guide me in the subsequent management of the cases. Some two or three days previous, camps had been erected about one mile distant, and all the well and convalescent negroes were removed to them. Most of the sick were in one house, used as a hospital, and numbering sixteen cases. Some new cases were brought in during the night and next morning. Spent the night (Monday June 25th) in prescribing for the cases and attending to their

immediate wants. Next morning, at sunrise, I gave out the following general instructions to the overseer and nurses.

Tar-water to be exclusively used for drinking purposes, at the quarter, camps, and in the field. Water casks to be sunk in the field when needed, and emptied and replenished every day, coating them over with tar as often as may be needed. (Well water is used on this place and the well is in a good condition.) Tar fires to be kept burning around the houses of the sick at night. Doors and windows of all the quarters thrown open, well aired, with all their contents, and fumigated with burning tar and sulphur. Burning vinegar also to be used in the sick rooms. Chloride of lime sprinkled through all the rooms, and unslacked lime sprinkled under the houses and about the quarter yard. The sick to be all separated, and placed in separate rooms. The discharges of patients to be thrown into the river, and the soiled clothes and bedding of the sick to be washed or destroyed. ℞ charcoal ¼ lb., sulphur sublimat. ¾ lb.; mix, give to all the well adult negroes half a teaspoonfull night and morning; a smaller quantity to the children according to age. Any one having an action on the bowels at night, or any symptoms of illness, to be reported immediately, and the number and character of the discharges noticed through the day, by the driver or some one else. Care to be used in cooking, so that no improperly cooked articles will be eaten. Change the meat diet temporarily from pickled pork to smoked bacon.

Tuesday night, 8 o'clock, P. M. Nearly all cases better. One new case since morning. Five or six cases that are now convalescent appeared twenty-four hours previous almost hopeless. Wednesday morning, 8 o'clock, A. M. Six new cases; no deaths; all the old cases better; many of them discharged. 8 o'clock, P. M. One little negro girl died to-day. No more new cases, and all the rest doing well. Thursday morning, 8 o'clock. Two new cases this morning. No more new cases occurred, such as those set down above. The cases noted were all bad cases, accompanied by severe and alarming symptoms, and requiring active, prompt and powerful treatment. Many other cases, mild in character, requiring but one prescription, and not confining the patient more than a day or part of a day, are not set down as cases of cholera. Of this class, perhaps, there were from 30 to 40. Friday night; gave the last dose of charcoal and sulphur Saturday; cases all convalescent. Two cases of remittent fever.

Sunday, five new cases of febrile disease. From this date to the following Sunday, July 8th, no new cases of cholera; some few cases of fever; all recovered, and the place as free from sickness as is usual at any time.

Thus far I have avoided giving the treatment, and upon this point I shall be brief. During the acute stage, or at the onset of the disease, a powerful stimulant,* combining astringent, carminitive, anodyne and antispasmodic properties, was administered, *pro re nata*, preceded or immediately followed with usually calomel grs. xv., sometimes adding pulv. gum arabic and charcoal, and this repeated from three to five times, according to circumstances. Pounded ice allowed in moderation. Injections of starch, laudanum and charcoal were early resorted to and repeated as occasion required. Mustard freely used externally, dry warmth kept up, and frictions used on extremities. When a case became alarming on account of collapse, a large blister was applied to the epigastric region, and over this and the rest of the abdomen, mustard cataplasms. After the critical stage had passed, I usually prescribed a mixture of brandy and No. 6, and quinine as a convalescent remedy. The bowels were regulated by enemas or some mild laxative, if needed; light diet. This was the general course. As might be expected, the treatment was modified to suit the great diversity of cases and symptoms. Under the use of the above plan, I have seen quite a number of cases fully in collapse, and with cold, pulseless extremities, recover.

As to symptoms, I need not detail them to you, as you are familiar with them and understand their variety. I might simply remark they were the usual symptoms of malignant epidemic cholera. The negroes were gradually returned to quarters after five days; the cabins whitewashed and the quarters cleaned up.

From the foregoing history, you can perceive my general course of procedure. The same was followed in other cases, as opportunity offered and with the same apparent success, therefore it is hardly necessary to enter into a full history of the disease on other plantations.

On "*L'argent*" *plantation*, twenty miles up the river from this

* This is a preparation similar to Forward's drops, but of double the strength; fourth proof brandy used, and the whole saturated with bicarb. soda, prepared as desired by P. H. M'Graw, druggist of this city.

place, the epidemic ceased in three days after the use of prophylactic treatment. The mortality had been great, the cases running into fatal collapse in a short time. Had I to go over the ground again, or to meet this epidemic under similar circumstances, I should at once put all hands on the following medicine, in addition to what has been detailed: ℞ blue mass. capsicum, quinine, *āā* ℈jj. M. Div. into xx. pills. One taken night and morning. As to the *modus operandi* of this, you are familiar with it. As to *bleeding*, I am not much inclined to be in favor of it. Cases get well kindly after venesection, but they appear to me to be cases that would recover equally well without it. As to the use of sugar of lead, I am opposed to it *in toto*. If astringents or sedatives are needed, I prefer some other article.

As to the pulse of cholera cases, there has been no uniformity or any pulse characteristic of the disease. It has appeared slow, frequent, hard, soft, bounding, according to the age, temperament, state of the nervous system, mental condition or excitement, existing at the time.

Natchez, August 26, 1849. Yours, &c.,
C. S. M.

REPORTS FROM MISSISSIPPI.

AETICLE IV.—DISARTICULATION AND REMOVAL OF ONE HALF OF THE INFERIOR MAXILLA, FOR OSTEO-SARCOMA—BY A. M. CLEMENS, M.D., OF MACON.

Some time in June, 1847, I was consulted by C. H., in reference to a tumor on the lower jaw of one of his slaves a colored man, aged about thirty-seven. I found the tumo occupying the whole jaw, from near the symphysis to the angle on the right side. At a point opposite the second molar tooth, it was soft and fluctuating to the feel. I opened it with a lancet, and about two ounces of thin brownish pus escaped. His general health was

much impaired. He had, almost daily, slight chills followed by fever, which passed off in a few hours by profuse sweating. He had but little appetite, and exhibited great mental depression. I introduced a probe into the opening and found quite a cavity in the bone. On inquiring, I learned that the first symptom of disease was severe pain in the jaw, which began in February, 1845, and was supposed to originate from the second molar tooth. This was extracted and found to be sound. The pain still continuing, a second and third tooth were extracted, but without any relief. Hot fomentations were then applied to the face, with the effect of mitigating the pain to some extent. In June following, a hard tumor made its appearance in the situation where pain was first felt. In one month it attained the size of a walnut, when a physician was consulted, who pronounced it scrofula, and prescribed iodine. This treatment was continued nearly a year, but the tumor continued steadily to progress, attended with periods of severe pain. At this time another physician was consulted, who made no material alteration in the treatment. The iodine has been continued, with only occasional intermissions, up to the present time; and the system seems to be so saturated with it, that the probe which was introduced into the jaw presented the same appearance as if dipped into the tincture of iodine. I prescribed mild tonics, under the use of which his general health became much improved; but the tumor continued slowly to increase; and as I had no doubt of its incurable nature, I advised its removal by a surgical operation. Accordingly, on the 12th September, I performed the operation in the presence of Drs. Lyles, Archer, and some others. The incision was carried from the symphysis in a curved direction, to the articulation of the jaw—the convexity of the curve being downward. On separating the integument from the bone, it was found that the diseased portion could be entirely removed by sawing through, just beyond the angle on one side, and near the symphysis of the chin on the other. This was accomplished with some difficulty and delay, owing to the extreme restlessness of the patient. The hemorrhage was inconsiderable; the wound was closed with sutures and adhesive straps, and supported in the usual way. Sept. 21st—No untoward symptoms have followed the operation; a considerable portion of the external wound has healed by the first intention, and the remainder is filling up with healthy granulations. Oct. 14th—The wound

caused by the operation had entirely healed, and the patient was discharged apparently quite well.

I saw no more of this patient until sometime in March last, when he was sent to me on account of severe pain located in the ramus of the side from which the tumor had been exsected. There was no enlargement of the part, but it was very sore under pressure. His general health was good. Having a return of the disease, I advised the removal of the affected bone at the articulation. My advice was neglected, and I did not again see the patient until early in the following August. In the meantime the disease had made rapid progress. Shortly after his visit to me in March, an enlargement of the ramus was perceptible; this continued to increase rapidly until, by August, the tumor had attained a size somewhat larger than a man's fist. The integuments at the lower part had ulcerated, and a dark fungus protruded. I had now serious doubts as to the propriety of an operation for its removal; but being urgently solicited, both by the negro and his master, I consented to operate a second time. Owing to the highly vascular condition of the tumor and the parts in its immediate neighborhood, I thought it prudent to ligature the common carotid, as a preliminary step to the disarticulation. Accordingly, after the patient had been placed fully under the influence of chloroform, the necessary incisions were made and the vessel secured just below the point where it is crossed by the omohyoid muscle. I now made an incision, commencing over the articulation and carried downwards along the posterior margin of the tumor, terminated at a point about midway between the angle and symphysis. Another incision was then made, commencing just below the first, and carried along in front of it, (so as to include the cicatrix of the former operation,) and terminating with it. The tumor was now separated, as far as practicable, from its attachments, the capsular ligament of the joint divided—the tumor turned over from behind, forward, pressed downward, the temporal muscle divided at its insertion, and the removal was effected.

The hæmorrhage was very trifling. The cavity was lightly filled with lint, and the edges of the wound brought in apposition with sutures and adhesive stripes, and the parts supported

with a light bandage. The healing process went on rather slowly, though by the fortieth day the wound was healed throughout. The ligature around the carotid came away on the twenty-fifth day. On the forty-second day from the operation the patient was again discharged, apparently well. The deligation of the carotid as a preliminary step in such operations, has, I know, been condemned by some surgeons, and in most cases of the kind it is, perhaps, not only not necessary, but diminishes the chances of a favorable result. In the case under consideration, however, to have depended upon securing all the vessels requiring ligature during the operation, would have protracted the operation greatly; besides, there must have been much blood lost, an evil, to my mind, of greater magnitude than the deligation of the artery. For three months and a half there was every reason to believe that the operation had been completely successful in eradicating the disease; but about the 16th of last month the boy was again sent to me on account of pain and swelling in the superior maxilla of the same side. The patient described the pain in the upper jaw as being of a precisely similar character to that of the lower. Five days since, I visited him and found a tumor nearly the size of a hen's egg, occupying the cavity under the zygomatic process of the temporal bone and os malæ. Presenting a soft point about its centre, I punctured it, when a few ounces of very dark, thin pus, intermixed with small fragments of bone, escaped. A probe entered at the opening passed into the antrum. His general health has again become bad. I have declined performing any further operation for the relief of this patient.

It is to be regretted, first, that disarticulation was was not effected in the first operation; 2dly, that the second operation was not performed five months earlier; but more than all, that the disease was not correctly diagnosed on its first appearance, when it could have been removed by a much slighter operation; one producing much less deformity and promising infinitely better chances of success. The operation of removing a portion of the lower jaw for the cure of osteo-sarcoma, has been so often repeated, and with such uniform and permanent success, that the failure in this instance cannot be considered an objection to its performance.

Macon, Miss., February 20, 1850.

REPORTS FROM MISSISSIPPI.

ARTICLE V.—On the medicinal waters of Mississippi—the artesian springs of Madison County.

For twenty years past, some of the mineral springs of Mississippi have attracted attention on account of their medicinal virtues. Formerly, the "*Mississippi Springs*," near Clinton, in Hind's County, were most noted, and for a number of years were very much frequented on account of their convenient proximity to the great cotton-planting region. In those days it was customary for all the planters who could afford it, to take their families off from home during the sickly season. They spent the summer in travelling through the older States, or at the prominent watering places in Virginia, Kentucky, Tennessee and North Carolina; or sought some healthy locality in the pine woods of Mississippi. The Brandon and Mississippi Springs were generally crowded with visitors every summer, but the waters of neither of these places were strongly impregnated with minerals, and consequently possessed but slight medicinal virtues. Within the last five years, "*Cooper's Wells*" in Hind's County, and the "*Artesian Springs*" in Madison, have been brought into notice, presenting much higher claims to remedial powers than any mineral waters formerly known. They are both strongly *chalybeate*, and appear to be admirably adapted to the state of *anæmia and debility* caused by repeated attacks of the fevers, diarrhea and dysentery, so common in the lower valley of the Mississippi. The *chronic diarrhœa* of this region is one of the most intractable and fatal diseases of the South, and if the high pretensions of these mineral waters in its cure should be fully confirmed by experience,

they will supply a long sought *desideratum* and prove an inestimable boon.

We are indebted to our friend Dr. J. J. Pugh, a practitioner of extensive experience and high standing, for the following notice of the Artesian Springs:

CANTON, (Madison Co., Miss.,) March 15th, 1850.

DR. E. D. FENNER:

Dear Sir.—When I saw your prospectus for the publication of the "*Southern Medical Reports*," I partly promised myself to place at your disposal a report of some cases which fell under my observation during the past year; but between indolence and engagements, I have permitted the time for their preparation to elapse.

Failing in this contemplated purpose, I have thought that I might subserve the interest of a large class of invalids in the South, who annually travel in search of health, as well as, to some extent, the medical profession, who are often applied to for advice on this subject, by directing their attention to the *Artesian Springs*, in this county, formerly known as "*Roger's Springs*"

These springs have for many years attracted much attention in the surrounding counties; but owing to the fact that heretofore there were no public accommodations at the place, few visited them excepting such families as built cabins near and spent the summer there.

The universally high estimation in which the water is held by those who have tested their properties fully and frequently, induced an association of gentlemen of capital to purchase the property. They are now improving it on a very extended scale, and expect to be ready for the reception of company by the middle of May.

They are situated in a high, broken and dry country, at the foot of a spur of high lands lying between the Big Black and Pearl Rivers, at the western termination of the pine region in that portion of Mississippi.

The water is of that class of mineral waters known as *acidulated chalybeates*, containing iron largely, and a large amount of free carbonic acid gas. It has a slightly styptic, not un-

pleasant taste, becoming quite palatable after a little use; its temperature sufficiently low to be agreeable. Its medicinal properties are very *decidedly tonic*, improving rapidly the appetite, aiding digestion, and establishing rapidly, healthy action in the chylopoietic viscera. It has proved highly useful in all cases connected with debility of the digestive organs, and in diseases of the mucus tissues generally, but especially in chronic affections of the bowels, embracing diarrhea and dysentery; in debilitated conditions of females, attended with menorrhagia, amennorrhæa and fluor albus, whether attended with ulcerations or not; in functional diseases of the kidneys, particularly those connected with an excessive secretion of alkalies, unaccompanied by inflammation, in chronic catarrh of the bladder, and diseases of the urinary passages. I have often witnessed the most salutary influence in cutaneous affections depending on gastric or intestinal irritation. Some instances of relief of distressing gastric irritation frequently attending uterine disease have also occurred. Indeed I know of no resort to which the invalid may repair with more confidence in having his recuperative energies improved, than the Artesian Springs.

Respectfully, yours, &c.,

JOSEPH J. PUGH, M. D.

REPORTS FROM TENNESSEE.

REPORT OF THE COMMENCEMENT, PREVALENCE, FATALITY, TREATMENT, &C., OF PESTILENTIAL CHOLERA, IN MEMPHIS AND ITS VICINITY; WITH THE PROMINENT FACTS BEARING UPON THE UNSETTLED QUESTION OF ITS IMPORTED OR DOMESTIC ORIGIN.—BY LEWIS SHANKE, M. D., OF MEMPHIS, TENN.*

So much has been written and published on pestilential cholera, that the means may seem to have been furnished, to satisfy the most thorough inquirer into everything of interest or importance connected with this disease. The diversity of opinion however, as to its local or imported origin—its specific cause—its reproduction and extension by infection, or otherwise, all show that much is yet to be learned, if within the scope of human attainment, to prevent the alarming effects and fearful mortality of this devastating scourge.

Whether this much desired end may ever be attained or not, all proper efforts should be directed in that way; and though the object desired may not be fully accomplished, some beneficial progress may probably be made.

Already have many facts been satisfactorily settled, which tend not only to allay alarming apprehensions, but really to diminish greatly the mortality of this fatal pestilence. Among these may be enumerated the fact, that persons enjoying the advantages of dry, airy and well ventilated dwellings are comparatively exempt from attacks—that proper precaution and care in clothing, diet, and the avoidance of fatigue and exposure, afford very general

* This is the only report we have had the honor to receive from the physicians o Tennessee, and Dr. Shanks has our sincere thanks for his kind assistance at the commencement of our work. During the year contributions to the Medical Journals have proceeded from the different sections of the State, East, West, and Middle Tennesee, but none coming completely within the design of this work. An unprofessional friend has furnished us some notes relative to the Mineral Springs of Hardin County, but we have not had time to put them in proper shape for publication. From what we have learned of visitors to these Springs, we have no doubt they possess valuable medicinal qualities.

protection from the disease; that in its first stage, by watchful care and the prompt and proper use of remedies, it is as certainly curable as ordinary diarrhea; and that the safest plan of guarding against, and preventing its fatal results, consists in being provided with the well established means of protection, at or as near home as possible, so that the enemy may be quietly and calmly, but watchfully met, and its fatal attacks harmlessly prevented or warded off. The effects of fear, or an attempted retreat from cholera, gives it an almost certain victory, after being brought under its influence. Not more certainly fatal is a disorderly retreat in battle, seeking safety in flight, under an orderly fire or charge of bayonets, than a flight from cholera, in disregard of proper precaution and curative means, when the system is under the influence of the poison.

But, not designing even an attempt to interest the reader by general remarks on these facts, I return to the special object of this article.

The facts to which I have referred, and others which might be stated, have been ascertained and established by careful observations, faithfully recorded and compared with each other.

Such results, therefore, having been obtained by recorded observations and facts, induce me to attempt the task of furnishing those facts connected with the commencement and prevalence of cholera here, and such results of treatment as may be interesting and useful, to be recorded in your forthcoming number of Medical Reports in the south-west.

As I cannot expect to lead the reader on by the influence of romance, or a well established story, a statement of the points upon which the facts will mainly bear may induce those who feel their importance to examine them, and save those who do not both the time and trouble of doing so.

The important points of the local or imported origin, and the consequent result of its extension and reproduction here by infection or otherwise, will be mainly kept in view. Whatever may be said of the symptoms, will only be incident to the effects and result of certain remedies in its treatment.

Preliminary to the statement of the circumstances connected with the first, and other interesting cases which occurred, it is proper to furnish a condensed table of the deaths from cholera and other diseases during its prevalence here. The number of cases of cholera cannot be given, as no attempt was made to

enumerate them; and, indeed, the number of deaths can only be considered an approximation to the truth, as the means for obtaining full reports were unsatisfactory. The Board of Health was guarded in reporting no deaths of cholera except upon the best information that could be had. Many deaths, both of cholera and other diseases, were, therefore, neither reported nor registered.

1848				Cholera.	Other diseases.	Total.
December	21	to	31	14	3	17
1849						
January	1	"	15	24	3	27
"	15	"	30	19	4	23
February	1	"	15	7	8	15
"	15	"	30	4	1	5
March	1	"	15	4	3	7
"	15	"	31	35	3	38
April	1	"	15	16	4	20
"	15	"	21	6	3	9
May	1	"	15	1	11	12
"	15	"	30	20	8	28
June	1	"	15	23	3	26
"	15	"	30	96	23	119
July	1	"	15	21	31	52
				290	108	398

The first case of cholera that occurred amongst the citizens of Memphis was on the 22d day of December, 1848, though 2 deaths had occurred at the landing on the 20th and 21st, among the firemen on the steamboat Convoy, one of the New Orleans and Memphis packets, which arrived from the former port after a four days passage, on the 20th. Two days previous to her arrival cases and deaths were reported on the boats from New Orleans passing up the Mississippi River.

As an important fact in connection with the commencement and the progress of cholera in the Mississippi Valley, it is proper to state here, that all the accounts of the commencement of cholera in New Orleans concur in fixing the date of the first well-marked case on the 12th of December, and the second on the 13th, both off the ship Swanton, from Havre, which arrived at

New Orleans on the 11th. From the 15th the number of cases rapidly increased, and are reported to have occurred in different parts of the city.

About the 18th the first report of cases and deaths occurred on the boats passing up from New Orleans at this point, which is 4 to 5 days distant from that port, according to the speed, &c., of the boats.

These boats, therefore, left there on the 14th. At that time one to two packet boats arrived here regularly twice a week, from New Orleans, on Sunday and Wednesday evenings. The Convoy left New Orleans on the 16th, and arrived here on the 20th, with several cases of cholera, two of which died. These cases being from New Orleans, and at that time there being many cases on the different boats passing up the river, they require no special notice.

It is important, however, carefully to consider the first cases that occurred among the citizens of Memphis, and to note all the circumstances connected with their origin.

This I shall endeavour to do, leaving the reader to determine the bearing of the facts upon the mooted points of the local or imported origin of pestilential cholera.

These facts are entitled to some weight, because Memphis is by water near 800 miles distant from New Orleans, and there were but 10 days of time between the occurrence of the first case there and the first case here among our citizens.

For several weeks previous to the first case of cholera here, the city had been remarkably healthy. In two weeks previous to the 20th of September there had been no deaths.

This remarkable state of health, and exemption from mortality from any cause, was followed by a very general prevalence of influenza, in a very mild form, excepting a few cases. The tendency to bowel affections here, considering the unusual amount of rain and damp weather, according to my own observations, up to the commencement of cholera, was less than is common at this season of the year, during such damp weather.

There was then no evidence of strong tendency to bowel affections or any other fatal form of disease, except so far as it might be indicated by a general prevalence of influenza, in a

mild form, commencing a few days before the first cases of cholera.

The streets, alleys, etc., of the city were as clean as usual, and nothing really existed here, either in apparent cause or effect, to produce fear of a pestilential scourge, except the apprehension from a distance.

Asiatic cholera was known to be advancing over Europe in this direction, and its expected arrival in this country was finally announced nearly simultaneously in New York and New Orleans. In the former city it was stayed in its progress for a considerable time in the Quarantine Hospital, on Staten Island, making only some fifty cases and half as many victims, besides those of the passengers and crew of the ship who accompanied it there.

The news of its arrival in New Orleans, and its progress there, was soon followed by cases and deaths here, at our landing, and soon afterwards among our citizens.

The comparison of the means used to prevent the spread of the disease in New York and New Orleans, and their effect, does not come within the scope of our object, and they have only been alluded to in connection with the time of its commencement in this country.

The facts, so far stated, show that this city presented no obvious reason to fear a scourge, except from abroad. The circumstances connected with the first cases which occurred here are necessary, then, to make up an opinion as to the probability of the origination of the disease here, or its introduction from cases, or infected boats.

Next to the two deaths which occurred at the landing, on the Convoy, on the 20th and 21st, among the crew, was the case of one of the citizens.

Case 1st—Mr. Cleaveland, aged about 17 years, had been employed in huxtering fruit about town, and was in the habit of going about the steamboats when they landed, in passing, for the purpose of selling fruit to the passengers. He pursued this occupation up to the 21st December. On that night he was attacked with cholera at his home on Front street, near Market. The next day, at 2 P. M., he was collapsed and pulseless, and died the next morning, the 23d, at 2 A. M.

He was prominently exposed to the disease by visiting the passing boats when they landed, and also the Convoy; and he was also particularly predisposed, by a previous diarrhea, and general ill health.

Case 2d.—Mrs. P., aged about forty, living comfortably on a trading flat-boat, was attacked on the 26th. Her symptoms were arrested by medicine, though she had the pathognomonic rice water discharges, cramps, &c. The next day she ate an orange, which reproduced the watery purging, cramps, &c., the next night, and collapse by the next day. Partial reaction was produced, but from getting up out of bed, fainting and permanent collapse were again produced, followed by death on the 30th.

Case 3d.—Mr. Berry, aged about forty years, living also comfortably in a flat-boat, about 150 yards from case 2d; was attacked on the 27th with diarrhea. On the evening of the 28th, he had vomiting and cramps, and he died on the 29th.

Case 4th.—D. C. Young, a man of dissipated habits, living on a stationary boat, about 200 yards from case 3d, was attacked on the 29th with diarrhea; the ensuing night he had vomiting and cramps, and died the next day.

Case 5th.—Wm. Cunningham, lived on a flat-boat near case 3d. He was attending to business most of the day; was attacked violently in the evening and died that night, the 30th December.

Case 6th.—William Foist, lived on a flat-boat. He was attacked the night of the 30th, and died the next day.

All the cases except the first occurred in persons living on flat-boats within a quarter of a mile of each other, along the landing; and probably not one of them had been in contact with a case of cholera, certainly most of them had not been nearer to cases, or a point of infection, than to the steamboats as they passed along up the river close to the sterns of the flat-boats.

Case 7th.—William Turnage arrived in Memphis from New Orleans on the 28th, and stopped near the centre, in the front part of the city. He was attacked with diarrhea on the morning of the 29th, and died on the 30th.

Case 8th.—Dewitt arrived from New Orleans on the same

day that case 7th did. He walked about the next day, and died the next, which was the 30th. He lodged and died on Front street.

Cases 7 and 8 could not be considered as originating in Memphis, as they both sickened and died the third day after their arrival from New Orleans. They must, therefore, have received the poison either in New Orleans or on the boats coming up.

Case 9th.—A child of W. G. aged about three years, was attacked on the night of the 30th. The next morning at eight o'clock it was completely collapsed, and died about 12 M. that day, presenting, well marked, the symptoms and appearances of cholera.

This case occurred remote from the river, and also from Front street, on Main street, in the centre of the western part of the city. In the brief history of cholera in Memphis, which I furnished for the July No. of the American Medical Journal, this case is stated as the only one which occurred here before cholera became general, that was quite remote from any point of infection.

Since that article was written I inquired of the mother if that child had been near the river, to which the origination of all the other cases up to that time had been confined. She told me it had not; but that a family from New Orleans came to her boarding house on Thursday, and stayed until the next day; one of the children was sick with vomiting and purging, and she understood it died soon after they left her house.

Her child took sick Saturday night and died the next day.

Several other deaths occurred along the landing on the 31st of December, and before the 5th of January, cases and deaths occurred along the landing from one extreme to the other, making a distance along the river of a mile and a half or two miles; though no other cases had occurred in town except the cases 1 and 7, 8 and 9, the circumstances connected with which have been stated.

To understand the facts connected with the origin of all the cases up to the 5th January, amounting to about 25, which terminated fatally, it is necessary to state that the steamboat landing is at the lower end of the city; that the flat-boat land-

ing, at which business is done, extends from the steamboat landing in front of the town, up to the navy yard, above the navy yard, and some distance above the town, flat-boats land, for the purpose of lying free of wharfage until the state of the market can be ascertained, and at that time the news of cholera from below had caused a large number to land above the town and remain there.

The business part of the flat-boat landing is separated from the city by the promenade on the bluff in front and the batture formed between it and the river, from 3 to 600 yards. The population on the landing, including the few houses on the batture, on the 6th of January, was probably more than one thousand.

Between the landing and the city there is only a business intercourse, and after the commencement of cholera on the river this was very limited; and between the flat-boat and steamboat landings there was but little communication.

Cases certainly occurred at the upper part of the flat-boat landing, in persons from the upper country, who had neither been to the lower part of the flat-boat, nor to the steamboat landing, where the disease first commenced.

From a review of all the cases from the 21st of December to the 5th January, and all the facts connected with their origin, it will be seen that during the first fifteen days of the existence of cholera here, all the cases and deaths occurred along the landing, except the first case, which was prominently and repeatedly exposed to the disease at the steamboat landing, and cases 7 and 8, both of which must have been under the influence of the *materies morbi* before they came into the city, from the river below; and case 9, the child was exposed in its parent's house, to the family last from New Orleans, with a child who was sick and died, most probably of cholera.

The fact has been stated that but few, if any, of the cases and deaths, (for I have only enumerated the cases that were fatal,) which occurred along the entire extent of the landing before the 5th of January, had been in direct contact with cases of cholera, there being but little communication between the flat and steamboat landing, where the first cases were; and, that not a case had oocurred here, until several days after

the steamboats had landed, and passed up the river with cases and corpses on board.

Although but the few cases specified, out of the 25 deaths, had been in direct contact either with cases of cholera or infected steamboats, yet the others on the flat-boat landing had all occurred in persons living on boats lying in the channel of the river, where the infected steamboats passed daily close by them, the whole length of the landing.

The first fifteen days after the cholera commenced, all the cases that originated here, except two, occurred in persons equally exposed to the disease by their contiguity to the steamboats as they passed by them; and the inference is reasonable, that the cholera poison was transmitted to them from the steamboats, through the short distance of humid atmosphere intervening.

For several days after the 5th of January, most of the deaths occurred at the landing, and among draymen and others whose business required them to go to the river.

The questions might fairly be asked upon this statement of facts—If cholera was not imported here from New Orleans? If it originated here from epidemic influence. Why should nearly all the cases, for the first fifteen to twenty days, have occurred on a string of landing some two miles in length, contiguous to the steamboat channel, and no cases occur in the town, only a few hundred yards distant from the landing, but the two under the circumstances specified?

About the 8th of January, Mr. G. was attacked with cholera on a flat boat. He was removed to a boarding house on Exchange Square, in a densly built and crowded part of the city. Several of the rooms in the boarding house were rented to and occupied by families—making about 30 persons in the house, which contained only seven or eight rooms. Mr. G. had a violent attack which confined him several days, but he recovered.

On the 12th, several of those who were about him in the house sickened, and case after case occurred among the inmates, until by the 18th or 20th, twenty-seven out of the thirty persons in the house were attacked with cholera; five of whom died, and several relapsed; and but for the removal of most of

them out of the house, probably half or more would have died.

In the house adjoining this, there were several cases and two deaths by cholera, among persons who had frequent intercourse with those in the boarding house. Except in these three houses, the occupants of which had constant intercourse with each other, there was not another case in the neighborhood.

Whether the case brought from the river to this crowded and filthy house, and the very large number of cases which occurred soon afterwards, while the neighborhood was exempt from the disease, though crowded with other houses as filthy as that, were *mere coincidences*, or stand in the relation of *cause and effect*, it is unnecessary for me to decide.

The facts of most importance bearing on the question of the domestic or imported origin, and the question of the reproduction by epidemic or contagious influence of cases of cholera, are those connected with the first cases occurring where there was no evidence of any atmospherical tendency to bowel affections, as was the case here.

Hence the particular detail, even at the risk of tediousness, of the circumstances connected with the first cases, until the disease became so general that it would be difficult, satisfactorily to determine the extent of diffusion of the infection or choleric poison.

The terms infection and contagion are used synonimously, to express a cause emanating from a case, or infected foci which produce a like case in healthy persons. Having now arrived at a period in tracing the progress of cholera here, when the particular reference to cases is rendered of little interest, from the diffusion of the *materies morbi*, I shall close this branch of the subject by stating a few prominent facts which strongly indicate its importation and production by contagion.

The first general fact, is a reiteration of the statement made, [in the American Medical Journal, page 18, July No.] that "within three or four days after the first case occurred in New Orleans, all the boats leaving that port had cases among the crews and passengers, and thus the disease was speedily carried up all the rivers connected with New Orleans by steamboat communication. Not a single case, however, is known to

have originated anywhere above New Orleans, on any of the rivers, before infected boats and persons sick or dead of cholera were carried to the places where the disease was afterwards produced.

This statement is now reaffirmed, after much pains has been taken to determine its correctness, that not a single case of cholera has occurred on any of the rivers in this great valley, so far as I have been able to ascertain, until after the disease was carried to the place from an infected source.

As a demonstration of its being carried from Memphis and reproduced by contagion, the following facts are stated:

During the latter part of March, Mr. K. visited Memphis. When he returned home, 60 or 70 miles in the country, he was attacked with cholera and died. Within a few days afterwards, two of his grown daughters died of cholera. At that time there was not another case of the disease nearer to his family than Memphis.

On the 25th of June, Mr. H. A. died in the suburbs of Memphis, of cholera. In three or four days afterwards his wife started to her mother's at Brownsville. At Wesley, 40 miles from Memphis, and 10 miles from Brownsville, she was stopped by an attack of cholera, and sent for her mother and sister. On the 1st of July she died. On the 3d, her mother died of cholera, and on the 4th her sister was attacked, but recovered. There was not a case of cholera at that time nearer than Memphis.

In June, Mr. W. visited Memphis; on his return home he was attacked with cholera, but recovered. Within a few days, two grown daughters sickened and died of cholera. This family resided on Big-Creek, some 20 miles from here, and at the time there were no cases of cholera nearer than Memphis.

In these instances no other cases occurred afterwards in the neighborhood.

In the latter part of June, some 25 persons contracted cholera and died, within a small area of only a few hundred yards, in South Memphis.

A negro woman, Jane, who lived on the border of this highly infected region, had done a good deal of washing for the sick families. She took sick Tuesday night, and died Wednesday

evening of cholera. She was attended during the day and her corpse sat up with, in a small room, during the night, by two of her own sons and a negro woman, each of whom lived remote from her in the city, and in neighborhoods at that time free from cholera.

On Saturday night, at their different homes, and each remote from the others, all three were attacked with cholera, two of whom died.

These three cases are not so striking in proof of contagion, as of the time required to develope the disease after being exposed to the choleraic poison; because they were exposed not only to the case, in a small, confined room, but they were on the border of an infected neighborhood.

As I have proposed this report to be more a statement of facts than a discussion of the questions involved, I shall forbear indulging in such remarks as suggest themselves, on the comparison of cholera with other diseases, either in reference to the extent and rapidity of the diffusion of the *materies morbi*, in a virulent form, through the atmosphere, in its different states of susceptibility, or the various opinions in reference to the specific morbid poison by which it is produced.

On the first point, however, I feel authorized in expressing the opinion, from the evident production of the disease along the extensive line of Flatboat landing, by the transmission of the poison through the humid atmosphere from the steamboats, in passing, that the virus of cholera is more diffusible, and may be transmitted in a virulent form, much farther through the atmosphere in certain conditions, than the specific virus of the more strictly contagious diseases—such as small-pox, measles, etc.

On the question of the specific morbid virus which produces cholera, the microscopic observations which have been made by M. Pouchet, Barnet, Drs. Britten of Bristol, Burnell of Boston, Mussey of Cincinnati, &c., all demonstrating the fact, that innumerable animalculæ or infusoria are found, not only in the dejections from the bowels, but diffused through the body, especially in the muscular structure, certainly present the cryptogamous or the animalcular theory in an imposing point of view.

Confirmatory of these microscopic observations, is the fact also of the almost universality of cramps, of a peculiar character, in cholera, which no other cause seems satisfactorily to explain, except that of an irritant directly applied to the muscles involved. This irritant may be the animalculæ seen in the muscular structure.

While cholera may, in its general aspect, be likened by different theorists to the condition produced by profuse hemorrhage, by malignant congestic fever, by cholera morbus, by wasting diarrhea, &c., yet in all these diseases and the conditions of the system produced by them, the experienced and discriminating physician cannot have failed to observe that this universality of cramps of a peculiar character, and other pathognomonic symptoms, do not generally, if at all, present themselves.

Treatment, &c.—Having stated such facts as are deemed important in connection with the first cases, the progress, and prevalence of cholera here, that they may be recorded for comparison with the facts and circumstances connected with its occurrence at other places, without giving a detailed description of the disease, I shall briefly report the outline of treatment, the prominent remedies which succeeded best here.

Next to the preventive precautions, which were briefly alluded to in the commencement of this article, the remedial course to be observed during the prevalence of cholera, when almost every person within the range of the specific poison feels more or less its influence, is most important for the prevention of fatal attacks, and therefore merits some notice.

Disturbance of the digestive functions, and the natural peristaltic action of the bowels, or the functions of the liver or kidneys, together with disturbance of the nervous system, indicated by giddiness of the head, &c., are the first apparent effects of the *morbid virus*. This derangement of the abdominal viscera was indicated by flatulence, rumbling in the bowels—not distension so much as a peculiar feeling of twisting or drawing of the bowels and abdominal parietes to the spine—appetite impaired, but sometimes before an attack, morbid. By avoiding fatigue and exposure, and by special caution in the use of none but the most digestible food, in very limited

quantities, and some gentle tonic, such as tinc. cinchonæ, columbo, gentian, &c., or a little good brandy, these symptoms were relieved, and an attack warded off.

By this course, not taxing the enfeebled digestive powers and the enervated nervous system, and, at the same time, sustaining them by gentle tonics, healthy digestion and secretion were restored. If it failed in a reasonable time, the conjoint use of pil. hydrarg. aided in effecting the object.

But, without the use of mercurials at all, I have often seen the precursory symptoms pass off under this course, with a gentle bilious looseness of the bowels, and in some cases a copious discharge of urine, soon followed by a return of appetite and the general feeling of healthfulness. This seemingly *critical increased secretion of urine*, together with excretions of bile, &c., relieving the precursory stage of cholera, I have not seen noticed, from my present recollection, in any treatise on cholera. It occurred in myself three different times during the six months prevalence of cholera here, and each time indicated the subsidence of cholera symptoms.

Twice these symptoms were very prominent. In addition to the abdominal symptoms, there was for a day or two so much vertigo as to be very inconvenient and unpleasant.

Though I attended to business all the time, I abstained almost entirely from food; took coffee, tinc. cinchona comp. or a table spoonful of brandy once or twice a day, without any mercurial. The torpor and uneasiness of the bowels and other symptoms passed off, with a moderate bilious looseness of the bowels and very copious discharges of limpid urine. Upon particular inquiry of other persons, I found this *critical copious discharge of urine* under such circumstances was not at all uncommon.

If the precursory stage of cholera is thus carefully watched and judiciously treated, but few indeed, from my experience, will die of it, or even be seriously attacked.

It seems manifest, or my observations are much at fault, if the opiate or "stopping up plan of treatment," in this stage of the disease is adopted, that the virus must be locked up in the system, soon to explode, in probably a fatal attack.

In the second stage of the disease, the patient is often de-

luded by the feeling of comfortable relief of previous symptoms, by the copious but easy flowing off from the bowels of watery discharges. This feeling of relief often continues until the system is well nigh drained of its necessary *liquor sanguinis*, and vomiting and cramps indicate the speedy approach of the but too often dying agonies of cholera.

In this stage of the disease, when the symptoms are portensive of immediate danger, the discharges and the pouring into the stomach and bowels of the serum of the blood, must be speedily arrested, or the patient will die.

Whatever views may be entertained of the pathology of cholera, as to its inflammatory, congestive or neurotic character, the preponderance of opinion, from *experience*, is in favor of powerful stimulants, astringents and alteratives, to effect the necessary revulsion from the bowels, and restore healthy action and secretion.

When the discharges were very copious, I found in the recurrence of cholera here, in June, that the stimulants and anodines were rendered much more efficient by the addition of large doses of acetate of lead, not only in arresting them, but in relieving the irritation of the bowels.

In this condition I gave from 10 to 20 grains of acet. of lead, 10 to 20 grains of calomel, and a drachm of laudanum, and 10 to 20 grains of capsicum, or two to three drachms of the tinct. of capsicum at a dose, and repeated it as often as was necessary to arrest the discharges and produce reaction, assisted by enemas of 30 to 60 grains of the acet. of lead and a drachm of laudanum, in 2 to 4 ounces of water, with sometimes a spoonful or two of brandy, a blister over the stomach, stimulating, hot footbaths, &c. When the stomach was irritable, drinks of all kinds were ejected, and therefore, except a little cold water to wash down the medicine, they were withheld until reaction was produced. Mild, gently stimulating drinks, or toast water, so soon as the stomach would retain them and absorption was restored, were given freely.

Nothing so certainly arrested the vomiting and purging of the *liquor sanguinis* as the acet. of lead, when drinks were withheld entirely. The *albuminose* fluid poured into the stomach and bowels was immediately coagulated, and rendered so consistent and adhesive, that, though the wretching and heaving might

continue for a time, but little would be vomited up; and the discharges from the bowels, after being suspended by it, came away coagulated, and of pulcatious consistence, followed, in a day or two, by the slate-colored, and then, the dark bilious discharges, indicative of convalescence.

Although several drachms were used, by the mouth and per anum, in some cases, no unfavorable symptom occurred attributable to it; and while it did not prevent the action of mercury on the liver, it probably did to a considerable extent, control and prevent its action in producing ptyalism.

It was not used, and is not proposed, to supercede the use of other remedies, in the cure of this stage of cholera, but only as a powerful auxiliary to accomplish what everything else had failed to do so promptly and effectually.

In cases where the violent attacks of rice water purging and cramps supervened upon a morbid appetite imprudently indulged, by the use of indigestible food, it was of great importance to eject from the stomach this crude matter. This result was almost invariably produced by the above compound, with the maximum proportion of capsicum. Its promptly stimulating impression caused the stomach to disgorge itself, and then, the repeated doses were commonly retained, and produced the desired effect.

Upon the same principle of imparting tone and contractile power to the stomach, stimulants were found important adjuvants in enemas. When the aqueous discharges passed off involuntarily, and the injection of acetate of lead and laudanum failed to be retained or to arrest them, the addition of brandy, spirits of camphor or ammonia frequently produced contraction of the spincter ani, and not only caused them to be retained, but aided in arresting the purging without producing pain, or even unpleasant uneasiness.

The milder treatment for the precursory stage having been briefly indicated—the heroic use of the remedies as stated, was resorted to only in the stage of the disease and the particular state and condition of the system described, when the life of the patient depended upon the immediate arrest of the disease.

For the stage of complete collapse in cholera, or the occasional secondary fever, I have nothing worth taxing the reader's time to offer.

Memphis, November 27th, 1849.

REPORTS FROM SOUTH CAROLINA.

ARTICLE I.—OBSERVATIONS ON THE FEVER WHICH IS DEVELOPED IN THE CITY OF CHARLESTON AFTER EXPOSURE TO THE COUNTRY AIR, DURING THE SUMMER AND AUTUMN, AND WHICH IS HENCE CALLED COUNTRY FEVER.—BY THOMAS Y. SIMONS, M. D.*

I PROPOSE in this communication to investigate the character and treatment of what has been ordinarly termed *country fever*. It is so called because it is contracted by persons who have been long exposed to the air of certain parts of the country, or who sleep there during the hot months, and is developed in them after they return to the city. It prevails from May until the occurrence of a frost in autumn.

During the last century, according to our medical historians, the citizens of Charleston left the city in summer on account of its unhealthiness, to reside in the country, and there are now standing, on the Ashley and Cooper rivers and Goose-Creek many elegant mansions, where large families were reared and resided during the summer months. The reverse of this is now observed; these places can now only be inhabited by whites during the

* For want of any general report, or essay from the physicians of this noble old state, where medical science first dawned and took a respectable position in America, we give the following interesting paper from the *Charleston Medical Journal and Review for Sept.* 1849. The author is an able and experienced practitioner, and his observations are well worthy of attention. We fully endorse all he says in favor of the liberal administration of quinine in fevers, but with due deference we would remark, that he has yet to witness the full magical powers of this truly wonderful remedy. We can but think it unfortunate that the intelligent physicians of Charleston continue to use such terms as "*country fever*" and "*stranger's fever*;" as if the former signified any thing different from what is generally recognised as *bilious remittent fever*, or the latter any thing but *yellow fever*. The introduction of new and unnecessary terms is certainly objectionable. Our Charleston friends seem to have a mortal hatred to the very name of *yellow fever*. They are also disgusted with that homely old cognomen, *bilious remittent;* but we do not see that any thing is to be gained by the *repudiation* Objections have long been urged against the propriety of both these names, but they have become familiar to the profession throughout the world, and we may as well stick to them. They are certainly preferable to the terms "*stranger's fever*" and "*country fever*." —*Ed. S. Med. Reports.*

winter months, while the city is resorted to for health during the summer and autumn. That intermittent and remittent fevers prevailed then, that the duration of life was short, and that many suffered from the effects of malaria, such as enlarged spleen, diseased liver, and dropsical effusions, as the whites who reside there now do, is evident from the history of that period. The fevers, however, were not so fatal in their immediate effects as they have been in more modern times, and especially if the fever is developed after removal to the city. I cannot pretend to say whether the fever which, after exposure in the country, is developed in the city is different from what it would have been if the patient had remained in the country. From all the information I can obtain from the physicians living on islands where the planters reside in summer, on the seashore, the influence of the sea air is regarded as materially aggravating the symptoms, and it is thought that the patient would have a better chance of recovery by remaining on the plantation when taken sick, than if he returned to the seabeach.

I am disposed to think that the same is the case in relation to the city, and it is in this manner alone that we can account for a smaller proportionate mortality among those remaining in the country when attacked with fever than among those who have fever developed after returning to the city. But I am not disposed to enter into any unnecessary discussion on this point. I will, therefore, proceed to describe the symptoms of the country malarial fever, which in spring and during the summer occurs in our city, in consequence of previous exposure in the country.

The fever is generally preceded by great uneasiness, lassitude and restlessness. It commences with a sense of coldness, but not a positive chill; the hands and feet are cold, and to this succeeds a very hot fever, the duration of which varies. On the second day there is a remission, so great as almost to amount to an intermission. On the third day there is a paroxysm, similar to and often more aggraved than the first. On the fourth day there is again almost an entire intermission; on the fifth a paroxysm again occurs; on the sixth a remission; on the seventh another paroxysm, and on the eighth another

remission. If the fever is not now arrested a paroxysm takes place on the ninth day, and, if it does not terminate in death the disease assumes a continued, typhoid character, and death or convalescence takes place on the fourteenth day.

Such is the general course of the disease, the paroxysm increasing or diminishing in severity on the odd days, up to the ninth, according as the disease is making progress or the reverse. The invasion of the paroxysms is associated with a sense of sinking and great debility, and a disposition to collapse. It is in this stage that the patient dies, when the fever proves fatal. There is either much excitement of the nervous and circulatory systems, or a state of diminished action, as in other fevers, according to the temperament and habit of the individual. Uneasiness in the præcordial region, and oppressed respiration, are frequently observed, with deep sighing and yawning, which, if strongly marked, are of bad omen. The action of the cutaneous capillaries is diminished, that of the mucus capillaries is increased, evincing a continued determination to the latter. The brain is not often affected; the mind is generally clear, except during a paroxysm of fever.

From this description it will be seen that this fever is not dissimilar, in some respects, to that described by Hippocrates, and in despite of the remarks of some physicians on the absurdity of good, bad and critical days,* these are, and I speak now from the experience and observation of twenty-eight years, clearly demonstrated in the fever now under consideration. The fifth, seventh and ninth days are particularly critical, and death or convalescence takes place on one of these, or the disease runs into the typhoid type. Death always occurs during the invasion of the paroxysm.

Celsus has come nearer to the description of this disease than any other writer; he describes it as follows: "Of tertians there are two sorts. One commencing and terminating like the quar-

* I am well aware that physicians of ancient times, as Asclepiades as well as Celsus, for example, combat the opinion of Hippocrates as to the critical days in any fevers, which gave rise at first to the modern views. But I do not think their reasoning good beyond this, that they are decidedly wanting in some fevers—a distinction between which has not been properly and wisely observed. Hippocrates of ancient, and Sydenham of modern times, still remain unrivalled for their descriptive powers of disease

tan, with this difference only, that it allows one day's interval, and returns on the third: the other, far more dangerous, returning, it is true, on the third day, but generally occupying by the accession six-and-thirty out of the forty-eight hours, sometimes also more, or less—nor does it entirely subside in the remission, but only becomes mitigated. Almost all physicians have denominated this species the semi-tertian."*

Let us now consider the pathology of this disease. There is, as has been already observed, a constant determination of action to the internal, and a corresponding diminution of action on the external surface; in other words, there is a diminution of the centrifugal, with an increase of the centripetal forces, the organs of nutrition and respiration being chiefly implicated, as is evinced by the sense of oppression in the præcordial region, the somewhat laborious breathing, and constant restlessness, attended sometimes with but little augmentation of the pulse, while the brain becomes only secondarily or incidentally involved. From this circumstance I am disposed to believe that the malarious poison, whether it be introduced into the organism by cutaneous or pulmonary absorption, affects the pneumogastric nerves with their plexuses, producing in a greater or less degree, according to the quantity absorbed and the degree of concentration of the poison, a loss of vital power in them by by which their functions are more or less impaired. Hence, if the fever be not arrested in its progress by remedial measures, the vitality of these nerves diminishes with each succeeding paroxysm, until the functions of the organs to which they are distributed, are so entirely destroyed that death ensues. If this be the correct pathological view, it will have a material bearing upon the course of treatment.

The prognosis of this disease, to one who had not had much experience of it, would be extremely deceptive and erroneous. I will state a case illustrating this point:

A friend whom I attended with another physician, had been very ill during the occurrence of the paroxysm on the fifth day, when he was threatened with collapse, and it was with great difficulty that reaction could be produced. On the next day, the sixth, there was a complete intermission; the

† Translation by Dr. E. Collier.

patient felt so much better that he got up, dressed, read and conversed with his friends. On the next day, the seventh, the paroxysm did not recur at the usual time, the patient was sensible, free of fever, and we were in hopes that the disease was arrested. After the lapse of two hours the hands and feet became cold, the symptoms of collapse increased, and in one hour's time he was a corpse.

One inexperienced in this disease would, on seeing the patient before the occurrence of the paroxysm, have considered him out of danger. This is but one of many similar cases I have seen.

I have said that the 5th, 7th and 9th days were critical; the 14th has been deemed so likewise, but this is not so certain. If the paroxysm is less severe on the 5th day, with great care and attention, (the patient avoiding all excitement, either from company, even of the nearest relatives—a serious and often fatal error—or from improper food, taken under the erroneous impression that he will die unless nourishment is taken,) that of the 7th day may be expected to be milder, and by judicious treatment the patient may escape the paroxysm of the 9th day and recover. But if the paroxysm of the 5th is severe, succeeded by one still more severe, and if death does not take place in the latter, a fatal termination may be expected on the invasion of the paroxysm of the 9th day. I regard a sense of oppression in the chest, with deep sighing and yawning, either during the remissions or exacerbations as a fatal symptom; and similar observations I have made of yellow fever.

We will next consider the medical treatment of this disease. The practice which formerly prevailed among many eminent physicians in this, as well as in yellow fever, consisted in the employment of calomel, for the purpose of producing the mercurial impression, combined with the use of occasional purgatives, blisters, mustard-plasters, sponging the body, and the application of cold to the head. But their principal dependence for the cure was upon the salivation produced by the mercury. Not having fully agreed with these views, although regarding colomel as a valuable adjuvant, I cannot pretend to say whether it was successful or not.

Another means has been greatly relied upon, viz.: the use of the lancet during the exacerbations, with the view of lessening

excitement, diminishing their duration, and preventing capillary congestion of the different organs. Many eminent practitioners in the country have regarded it as the main agent for the cure of fever, and say that it has proved very successful. But venesection has not been so extensively resorted to in the cases which have occurred in the city. I have found it a valuable adjuvant in certain cases, when practised in the early stages the disease.

There was another plan formerly used, and much relied upon viz.: the use of emetics of tartar, followed by the administration of bark during the remissions. The treatment was quite successful, which I attribute not so much to the emetic as to the cinchona; for tartar has a strong tendency to produce collapse, although in the incipiency of this disease emetics are sometimes useful, but generally they are of doubtful value. The administration of bark was, however, often impracticable from the irritability of the stomach and the quantity required to be given. The active principle of cinchona having been separated by pharmaceutical processes, it can now be administered in a much less bulky form. Quinine has now been for sometime in use, and has been most successfully administered in the fevers of the country, as well as those developed in the city. I therefore, regard it in these fevers as of great value and importance.

The number of our valuable citizens who have died in early life, as well as mature age, from this fever, and, consequently, the frequent failures of cure under the most eminent physicians formerly, had long satisfied me of the importance of some change of treatment.

For many years, in the fevers of the country throughout the Southern and Western States, we are informed that since the introduction of the use of quinine, the mortality has not only greatly diminished, but the disease has lost much of its terror.

Although quinine has been used for many years in this city in the treatment of fever, and I have myself frequently prescribed it in cases of fever, I never was so fully satisfied of its positive good effect as applicable to all cases until 1848, when I had 15 cases under my care, in addition to some others this summer, all of which recovered, much to my surprise as well as gratification. In all the cases, in place of exciting gastric irritability it calmed it, relieved nervous excitement, and regulated arterial action.

After given to a certain extent, either a partial deafness or ringing in the ears was produced. In some cases the patients imagined it was raining, but the mental faculties were not at all disturbed. I shall now state the plan of administration by me, which differs from that recommended by physicians practising in the country, which is to give one or two large doses before the invasion of the exacerbation.

My plan is, if the bowels are confined to give a good mercurial purge of rhubarb and calomel, and upon the remission of the fever to give two grains of quinine every two hours, until a sense of ringing in the ears or partial deafness ensues, or until the exacerbation supervenes—keeping the liver secreting by the use of blue pill every 4 hours during the day, and the bowels relieved when necessary, by injections; avoiding active cathartics, if possible.* This plan is continued until the fever is arrested, which I have found generally to be after the second or third invasion. Sinapisms, blisters and rubefacients, or cold evaporating applications, are used likewise when indicated. I should not hesitate to use bleeding generally and topically during the exacerbation, but I deem these should be done in the earlier stage of the disease.

I here beg leave to introduce some remarks from an interesting little volume, published in 1786, by the celebrated Dr. Moore, entitled, "Medical Sketches upon the use of Cinchona in Fevers," which I think equally applicable as regards the use of quinine.

"It was long an almost universal opinion, and is still the opinion of many, that the bark cannot safely be given in any fevers but the intermittent, and not in them till the intermission is perfect. In unformed intermittents, therefore, and the remitting fevers now under consideration, the practice was to give neutral salts and saline mixtures after the first evacuations, in the expectation that by the continuing these medicines the *remissions* would gradually become *complete intermissions*, and then the bark might be given with safety.

"But this expectation was so often disappointed, and the remissions, instead of becoming longer and more distinct during

* I regard the keeping up of the bilious secrections as well as unloading the bowels by injections, as very essential to prevent hepatic and visceral obstructions or derangements which might ensue; and I am inclined to think, that while in former times the bark cured the fever, the neglect of alterative agents collaterally produced structural derangements affecting the liver, spleen, kidneys and bowels, which ultimately produced, in some cases, Dropsies.

this suspension of the bark, were so apt to disappear altogether and the fever to advance with a less interrupted pace and more violent symptoms, that some practitioners, on whose minds long established opinions had less influence than ordinary, ventured to give the bark without waiting for such a perfect intermission as the common practice prescribed; and their boldness, in many instances, was crowned with success.

"Mr. Cleghorn, formerly surgeon to a regiment at Minorca, and afterwards lecturer on anatomy in the University of Dublin, by his observations on the epidemical diseases of that island, contributed greatly to the removal of this prejudice. That gentleman displays in his book* great learning, a most acute judgment, and much liberality of mind; he candidly acknowledges the errors of his early practice; and to prevent others from falling into the same, seems to have been his chief inducement for publishing; and there is good reason to believe that his publication has saved many lives. His observations have been confirmed by those of several judicious practitioners who have appeared since. But he whose penetration first overcomes an hurtful prejudice is entitled to the first praise.

"The experience of candid and judicious practitioners *alone* ought to have weight in determining the propriety or impropriety of this method, which can neither be strengthened nor weakened by any inquiry into the manner in which the bark acts, whether it is by a tonic power, acting on the nerves of the stomach, and communicated by them to the whole body, or whether it produces its effects in a slower manner by its operation on the fluids: Such inquiries are far more curious than useful; but, were they more useful than curious, the investigation would be equally fruitless; and those who hesitate to give the bark till it is clearly made out in what manner it performs its effects, will, in all human probability, continue hesitating to the end of their lives."

I cannot conclude these few observations upon a very important disease, in which I have scrupulously avoided any theoretical opinions, without suggesting some prophylactic means, which are the result of personal experience, the experience of intelligent and observing physicians practising in the country, and of planters.

I will first refer to pine land settlements, so valuable and important to planters: It should be prohibited for any one to cut down trees in the village, or even too much of the under-

* Vide Observations on the Epidemical diseases of Minorca, by George Cleghorn, Surgeon to General O'Farrel's regiment.

brush, for the value of trees is admitted by all writers on malaria, and the case of Pineville, in St. Stephen's, is a remarkable instance illustrative of this fact, without mentioning other cases from medical writers. This summer retreat, once healthy, became so sickly as to be in a great degree abandoned, in consequence of the numerous gardens and the clearing away of the trees. The gardens have been subsequently abandoned, the trees and under-brush grew up, and it has again become healthy.

Another circumstance is worthy of consideration, viz.: the obstructing any running stream, or allowing water to remain stagnant. Small pools from these sources have proved the cause of sickness in residences contiguous, while others, some short distance further off, have been exempt—the malarial poison producing its noxious effects at distances proportionate to the area from which it emanates.

I will now proceed to some general remarks. It is a very common practice with persons after going through their plantations, on their return home heated, to sit in a draught of air, having taken their coats off. This is very prejudicial, and liable to produce chill, the precursor of fever, and it is likewise improper to be exposed to the night air, and when so exposed the clothing should be warm.

I have heard it remarked by some experienced and intelligent physicians, that they attributed the preservation of their health, under great exposure, to wearing woollen clothes, and thus avoiding a chill, and having fires in their chambers at night when on a plantation, a subject which will be presently considered.

Again, persons should be careful how they remain near a rice field or a reserve when the water is flowing off—the exhalations arising therefrom are peculiarly offensive, oppressive, and oftentimes create nausea at the time, and the cases of fever from these causes have proved more generally fatal than any other, so far as my observation and inquiries have extended. It seems as if the malarial poison is concentrated, and consequently much more active in its impression on the system.

The letting off very large reservoirs has been known to make pine land settlements, previously healthy, infected with fever of a fatal character.

To those who are required to sleep in the country, a small fire

should be made in the room to be slept in, for a short time, to get rid of the moist air, and large fires should be made around the house, and kept burning all night, for a similar purpose. All writers on malaria* seem to concur as regards the preventive qualities of smoke. There is in my mind little doubt that soldiers and wagoners, who have frequently to sleep in swampy regions, have often escaped fever from the kindling of large fires around where they slept, thus dispelling the moist air in which the poison, whatever it is, floats.

"As to the facts in proof of the utility of fires, (says Dr. McCulloch in his work on Malaria,) Lancisi points it out as to Rome; and even Pliny, long ago, declares the same opinion, quoting further the authorities of Empedocles and Hippocrates to the same effect. That Napoleon took the same view of their use, adopting this expedient very largely, and with success, when his armies were occupied in the very worst district of Italy, is a specimen of military experience which may save the necessity of quoting others less decisive. One very pointed case, of a civil nature, is also worth recording; because, while it is always particularly easy to imitate, and has been most unfortunately neglected, the circumstances are such as to interest ourselves, as colonists, under some of our least satisfactory experiments of this nature. In this case, the superintendent engaged in directing the cutting of wood in Africa erected thirty earthern furnaces on the spot where his men were employed, lighting them every day. Before this, he had always from forty to forty-eight of his workmen sick, when in a short time they were reduced to twelve, then to four, and finally to one."

Having offered these general remarks, I cannot conclude without referring to what I regard as one of the most important movements which can be made for the promotion of the prosperity and health of the State. It is to ascertain the localities which are healthy and those which are liable to fevers—the means of preserving the health of those which are now healthy and of correcting and ameliorating those which are sickly. It is a noble and philanthropic object, and one which should bring forth the energies and observation of every intelligent physician in the State. The State Medical Association has appointed a committee as regards this subject, which committee, it is to be hoped, will receive ample materials of information in the different districts and parishes in the State.

* See McCulloch's work on Malaria, which every physician practising in the country should possess.

REPORTS FROM SOUTH CAROLINA

ARTICLE II.—On the yellow fever of Charleston, in 1849. By the editor of the Charleston Medical Journal and Review.*

For the first time since 1839 yellow fever has prevailed in an epidemic form in our city. Its appearance was preceded by unusually hot weather during the latter part of the month of August; the state of the thermometer for August and September will be found in the Meteorological Table, in another part of the Journal. A violent thunder storm—one of the severest we have ever known—accompanied by a heavy fall of rain, occurred on the 1st of September. This was succeeded by north-east winds and cool weather for a fortnight, in spite of which the disease spread slowly and steadily.

The first death from yellow fever occurred on the 6th of August, in a sailor of the Spanish barque Numa. The Numa arrived at this port on the 18th of July, after a passage of 8 days, from Havana. She was in ballast, and lay at the lower of the Union Wharves. On the 3d or 4th of August the sailor alluded to sickened. On the 6th he was sent into the Marine Hospital, where he died in the course of the same night, having thrown up a quantity of black vomit before death. After death black vomit was found in the stomach and intestines.

Two other cases, of a similar character but milder in type, occurred about the same time in the same vessel. They recovered.

The next death was on the 29th of August. Holman, a German, arrived in this city on the steamer from Savannah, August 24th. He entered the hospital of the Poor House on the 25th, and died four days after with well marked symptoms of yellow fever.

On the 1st September Capt. L., of the barque Queen Victoria,

* From the Charleston Medical Journal and Review, November, 1849.

died. The ship had arrived at Charleston on the 18th August, from Hull, England, after a passage of 52 days. She lay at Patton's Wharf, foot of Hasel street, next wharf above Union Wharves. (The latter are four in number.) Ten days after arrival, i. e., August 28th, Capt. L. was attacked with violent pains in head, back and limbs, with high fever. Black vomit came on the 30th, and he died on the 1st September, after an illness of little more than 4 days.

Five or six of the seamen of the ship were subsequently attacked with fever, accompanied by great pain in head, back, &c. But they were slight cases, and all recovered. The fever was of one paroxysm and lasted from 24 to 60 hours.

The next death was on September 2d. S., a German, five years in Charleston, residing corner of East Bay and Elliott street, had been to the North during part of summer, returned in July. Sickened about the same time as last case, and died one day later, September 2d. Communication with the vessels of Union Wharves has been traced in this case.

The next death was September 7th. Mr. ——, by birth a Northerner, a resident of this city for 10 or 12 years, but frequently absent during the summer. Had returned from the north in the latter days of August. Resides corner of Hasel street and East Bay. Sickened September 3d, black vomit on 6th, death on 7th.

The next was in Church street, below Broad. Martin, an Irishman, aged 35, 18 months in Charleston, sickened on 2d, died on 8th September.

On the same day Carrol, Irish, aged 28, in Charleston 3 years, residing on East Bay, nearly opposite the 5th case, died after a short illness, in which he threw up a very large quantity of black vomit.

Thus, up to the 8th of September, there had been seven deaths of the disease. From this time it became more extended, many cases occurring in different parts of the city, but principally in Linguard and Market streets, the victims being chiefly Irish and Dutch, of the lower classes. Independent of cases of decided yellow fever, a large number of fever cases were observed, sometimes invading violently with intense headache, flushed face, suffused eye and high fever, but many of them going off after 24 or 48 hours, and the patients at once entering into full convalescence. There is some doubt with the profession here

how these cases are to be ranked—some regarding them as cases of ephemeral fever, others as mild cases of yellow fever. The circumstance which entitles the latter view to consideration is the fact that such cases are unusually frequent during the prevalence of yellow fever; but it will always be a matter of opinion, influenced by the peculiar frame of mind of each observer, as to how they should be classed.

The mortality from yellow fever has been as follows:

From occurence of first case to September 8th,								7	deaths.
For week ending			September	15th,	-	-	-	7	"
"	"	"	"	22d,*	-	-	-	17	"
"	"	"	"	29th,	-	-	-	11	"
"	"	"	October	6th,	-	-	-	18	"
"	"	"	"	13th,	-	-	-	23	"
"	"	"	"	20th,	-	-	-	13	"
"	"	"	"	27th,	-	-	-	13	"
Total,								109†	

Of the 109 deaths, 41 were Irish; 9 from England and Scotland; 35 from Germany; 11 from different States of the United States; 2 Spanish; 3 from South Carolina; 3 from Charleston; 2 from Italy; 1 from the Azores; 1 from British America; and 1 unknown.

Of the 3 from Charleston, one was a child 18 months old; one a young man 18 years old; and the third, a negro.

Since the 27th, and up to the time of writing this, (31st Oct.,) there have been three or four deaths, making the whole mortality, to date, 112 or 113.

As the cold weather has now apparently set in, we hope it will not be our duty to record any deaths after the present week.

* A thunder storm, accompanied by wind and rain, occurred afternoon of 22d.

† From a subsequent number of the *Charleston Journal*, (March, 1850,) we learn that there were 78 deaths from yellow fever in October, and 5 in November—thus making the whole number of deaths from this disease 125.

NOTE.—In this short paper, we find striking confirmation of some of the conclusions announced in our report on the fevers of New Orleans, to be found in this volume. It seems that in Charleston as well as in New Orleans, other forms of endemic fever "are unusually frequent during the prevalence of yellow fever"—"that there is some doubt with the profession (there) how these cases are to be ranked;" and that *Creoles* there take and die of yellow fever, as they do here. This is but what we should expect, after all we have seen in New Orleans; and we are glad to see the fact stated by the editors of this journal. If these gentlemen will take a comprehensive view of all the facts presented during a sickly season in Charleston, they may be induced to take new and more correct views of the nature of yellow fever. We want *statistics* on the subject.—*Ed. S. Med. Reps.*

REPORTS FROM SOUTH CAROLINA.

ARTICLE III.—Reports of cases in private practice. By W. F. Holmes, M. D of Maybinton, S. C.

I. The Nitrate of Silver in Anginose Affections.—My experience in the treatment of anginous diseases by the topical application of a caustic solution of the nitrate of silver, has resulted so happily, that I deem it a matter of some consequence to communicate my success to my professional brethren.

E. H., a robust, plethoric child, five years of age, was violently attacked with cynanche tonsillaris. I was called in immediately, and promptly instituted the old practice, by emetics, the warm bath, revellents and scarification. The child became somewhat relieved temporarily, but during an absence of two hours duration, grew much worse. Upon my return, I found the inflammatory stage exquisitely developed; the pulse was rapid and bounding; the skin in a highly pyrectic state; the tonsils of a deep scarlet color, and very much swollen; the uvula, velum palati, and the surrounding areolar tissue, were implicated in the disease. There was aphonia, and deglutition was almost impossible, regurgitation taking place through the nostrils. The idea occurred to me to use the nitrate of silver, and I promptly entered upon its execution. About 50 grs. of this substance were dissolved in an ounce of water, and a piece of sponge thoroughly saturated with the solution and secured upon the end of a probang, was introduced between the tonsils, carried down into the pharynx, and immediately withdrawn. A violent paroxysm of coughing ensued upon its removal, but the relief was almost instantaneous.

After the lapse of fifteen minutes, the sponge was saturated anew and inserted as before, with like success. This was repeated several times without any unpleasant symptoms supervening. The child recovered rapidly.

I look upon the nitrate of silver as a most efficient and speedy agent in the cure of diphtheritic croup, and its timely application will almost invariably jugulate an attack of ordinary acute laryngitis uncomplicated with the formation of false membrane. It is easy of application, prompt in its action, and of decided utility. I have used it with success in mild cases of chronic bronchitis, (where it acted by the sympathy of continuity, I suppose,) and with marked advantage in ordinary paristhmites, and in the ulcerous sore throat which occurs as one of the sequelæ of syphilis. And I have no doubt but that it would prove an inestimable auxiliary in our management of that grave disease, malignant sore throat, when accompanied with adynamic fever and serious prostration of the vital powers. It seems peculiarly adapted to the relief of all mucous membranes, when inflamed or in a state of incipient ulceration. I have used it with benefit in the ileo-colitis of typhoid fever, when follicular ulceration had taken place, as indicated by the fœtor of the breath, the extreme foulness of the dejections and meteorism. In this disease, I conceive the blood, from the great tendency to hemorrhage and extravasation, to be in a condition nearly allied to scurvy; and in such cases the nitrate of silver, in conjunction with balsam copaiba, often transcends our most sanguine anticipations. Every practitioner is acquainted with its unquestionable utility, when topically applied, in blenorrhagia and inflammation of the external coats of the eye.

II.—*A case of Paralysis treated with strychnine.*—Mr. H. had been the subject of hemiplegia for a number of years. He had undergone various modes of treatment under different physicians, until his constitution, already seriously impaired by the disease, had become entirely broken down, and his mind extensively diseased. His residence was peculiarly subjected to the influence of paludal miasma, being situated on the bank of a turbid, sluggish stream, with extensive alluvial grounds, badly drained and exposed to the action of an autumnal

sun. The frequent recurrence of intermittent fever had imperiously demanded, as he supposed, the repeated use of calomel. He had victimized himself thus until his entire organization had become so deranged as almost to preclude all hope of his recovery. I was requested to undertake the case. I prescribed one-eighth of a grain of strychnine to be taken morning and night. Upon the first and second days he expressed himself highly pleased with the effects of the medicine. On the third day he complained that the action of the strychnine was not so satisfactory as on the day previous. At 11 P. M. I was sent for in great haste and found him laboring under the most startling phenomena, which would have alarmed any one unacquainted with the effects of the drug. There were spasmodic twitching of the muscles, extraordinary nervous erethism, great agony of mind and a sensation, as he described it, as if a thousand needles were perforating the surface. I gave him large doses of spt. terebinthinæ, and the unpleasant symptoms subsided during the night. He convalesced rapidly, and although he has not recovered his pristine vigor, yet he enjoys good health; his entire organism having undergone a radical change.

III.—*Belladonna in Pertussis.*—This is by far the best remedy that I have ever used in simple, uncomplicated hooping-cough. It was recommended to me some time since by a medical friend, and since then I have had many opportunities for experimenting with it. Indeed, it has surpassed my expectations. I prefer the extract, and usually give it in large doses combined with carb. ammoniæ. It seems happily to allay that peculiar irritation of the pneumogastric nerve, which is pathognomonic of the disease. Its exhibition is contraindicated by the cerebral and biliary complications, which require their appropriate treatment.

ART. IV.—The South Carolina Medical Association.

This institution was organised by a convention of the physicians of the State in the year 1848, and held its first anniversary meeting in Charleston, on the 21st of February, 1849.

Upon that occasion, as we learn from the Charleston Medical Journal, "about one hundred members were in attendance. The President, Professor James Moultrie, called the Association to order, and delivered a brief and elegant address, in which he dwelt on the necessities for progress of the age, and encouraged the members to unceasing exertions in accomplishing the objects of the Association. The transactions of the Board of Counsellors for the past year were then read, and the Association proceeded to business."

D. F. P. Porcher, from the Committee on the Medical Botany of the State, presented a very extended report, containing a full list of the medicinal plants of the State, with all the more important bibliographical references.

A committee was appointed, consisting of one from each district, besides a chairman, to report annually "on the Medical Topography and Diseases of the State."

Dr. P. C. Gaillard delivered the anniversary oration, the subject being "Some Points of Hygiene, connected with the extension of cholera and Yellow Fever." (We have since had the pleasure of reading this address in the Charleston Journal, and found it replete with profound reflections.)

Dr. Simons read a letter from the Governor of the State, in relation to the means of improving the health of the low country, and asking for information on several points in connection with this subject. It was referred to the committee on the "Topography and Diseases of the State."

Dr. Davis, of Abbeville, called the attention of the Association to the fact, that under the law for the inspection of drugs, an incompetent person had been appointed as inspector for the port of Charleston. Whereupon, resolutions were adopted, providing for bringing the matter to the notice of the Secretary of the Treasury.

Dr. Isaac Branch, of Abbeville, called the attention of the Association to the working of the law in relation to the importation of spurious drugs, and introduced resolutions appointing the Charleston delegation a committee to memorialize the legislature of the State on the propriety and necessity of appointing local inspectors, the more thoroughly to carry out the objects proposed in the passage of the *drug law* by Congress.

After partaking of the anniversary dinner, where the greatest sociality and cordiality prevailed, the Association adjourned till the next annual meeting. The following officers were elected for the year:

Dr. James Moultrie, *President.*
Dr. R. C. Wylie, of Lancaster, } *Vice Presidents.*
Dr. John Douglass, of Chester, }
Dr. Cain, of Charleston, *Rec. Secretary.*
Dr. Mayes, of Sumpter, *Cor. Secretary.*
Dr. W. T. Wragg, of Charleston, *Treasurer.*
Dr. J. P. Barratt, of Abbeville, *Orator for* 1850.

REPORTS FROM TEXAS.

ARTICLE I.—REPORT ON THE TOPOGRAPHY OF SAN ANTONIO, AND THE EPIDEMIC CHOLERA THAT PREVAILED THERE IN THE SPRING OF 1849.—BY J. J. B. WRIGHT, SURGEON, U. S. ARMY.

He who would sit down to write a paper on Cholera Asphyxia, at the present day, finds himself in many essential respects, like him, who would indite a treatise on Variola, or Pertussis, or Intermittent Fever; or like him who is constrained to elaborate a Fourth of July oration, or a eulogy on General Washington. The disease has prevailed everywhere; has ravaged all lands, leaving its foot-prints on the mountain top, and in the secluded valley, in the busy city, and in the quiet hamlet. Time and opportunity has been afforded the medical profession throughout the world, to regard it in all its aspects; to interrogate it, *ab imo pectoris;* to investigate, as far as human power will admit, its etiology, its pathology, its therapeutics. And we would fain hope that the profession has not been idle, when so many and earnest appeals have been made to its attention. Physicians have been

faithful in the discharge of their duties to science and the cause of humanity, and if entire success has not rewarded their efforts, the secret of the failure is due to the intrinsic difficulties of the subject, not to remissness in the prosecution of the inquiry; for they have carefully observed the disease in its beginning, course, and termination. So faithfully, indeed, have medical men acquitted themselves, so seduously have they scanned, and so cautiously noted every symptom in all their varying changes that little is left for the inquirer of the present day, but to add his testimony to the truthfulness, and accuracy of their delineations. And hence I may claim the indulgence of the medical public, if at the conclusion of this contribution to your "REPORTS," it shall be found that no important facts have been discovered, no new truths enunciated.

Of the disease, as it pursued its deadly course in San Antonio, I can say, "All of which I saw, and a great part of which I was." I saw it in its advent, and witnessed its last lingering vestiges as with seeming reluctance it took its departure. I brought to the investigation of the disease the humble powers I possess, in an earnest and faithful spirit of observation, and to its management, a confiding trust, to some extent, in the *armamentarium* of physic. The sequel will exhibit the baseless fabric of my hopes, the almost utter prostration of all confidence in the *ars medica*, in its relation to cholera; and will leave for inference the deep and mortifying humility I felt in witnessing too often, alas! the uninterrupted progress of the disease, unchecked by medication.

Irrespective of age, sex, or condition, the pestilence proceeded on its way, "pallida mors," &c., knocking alike at the portals of the comfortable mansion and the wicket of the jerkal. Among its most distinguished victims, it is my mournful duty to record the death of Major General Worth—"*Hinc illæ lachrymæ!!*" His death-bed presented a spectacle of more than ordinary interest; a spectacle unsurpassed in moral dignity and grandeur! The veteran soldier, the hero of three wars and many hard fought battles lay prostrate on the bed of death. With intellect unclouded, and sensibilities keenly alive to the sufferings he endured, he viewed with calm regard and undisturbed equanimity his approaching dissolution!

He quailed not, trembled not, but as his last words indicated, relying on the goodness and mercy of God, he breathed out his life as becomes the hero, the philosopher, the christian; for who that has not acquitted himself of his whole duty, as well to his Maker as his fellow man, can die as he died! This is not a fitting place to write the eulogy of General Worth, but in allusion to his case as belonging to the subject of this paper, I cannot refrain from offering a passing tribute to the memory of him who left a whole community in tears.

Asiatic cholera having prevailed in almost every climate, and on every soil, bearing its mission of death alike to the inhabitants of Nova Zembla and the tropics, has extended its ravages almost over the habitable globe, apparently regardless of geological construction within, or meteorological condition without. It might, therefore, seem a waste of time to refer to the medical topography of San Antonio in connexion with the epidemic. It is only in the hope that more extensive inquiries after specific facts, may lead to useful generalizations, and evoke important truths, that I am induced to say a word on this subject.

The city of San Antonio is situated in the midst of a valley, of unequal dimensions, through which, in a general direction from north to south runs the serpentine river of that name, having its origin in several beautiful springs four or five miles northeast of the city. The Rio San Pedro takes its rise also in a spring two miles north of the town, and running in a direction nearly parallel with the San Antonio, it skirts the city on its western border, and forms a junction with the latter two miles below the city. A large portion of the town is in proximity to the San Antonio, in some part of its course as it runs west and south, and west again, and in its meanderings leaves the precincts of the city, pursuing a course east of south. The San Antonio is a rapid stream, having a celerity of three or four miles an hour, varying in depth from three to six or seven feet, and averaging fifty feet in width. The San Pedro is less by one half than the San Antonio, but resembles it in the qualities of its water, and in general character.

The river water is pretty strongly impregnated with lime, but is agreeable to the taste, and is almost exclusively used for

culinary purposes and all other purposes. Stories were told and got admission into the distant newspapers, representing the water of the river as having acquired a fœtid smell and changed appearance during the prevalence of the epidemic. This statement seems founded in error; at least the alleged fact is not in accordance with my observation, and a constant and exclusive use of the water authorizes me to speak positively on the subject.

The superstratum included between the rivers, and comprising the limits of the city, consists of a deep, dark rich mould, vegetable debris, with large admixture of disentangled limestone, rendering the mud after rains almost as viscid as bird-lime. It is remarkably fertile when adequately watered, but without irrigation in seasons of drought, the surface acquires a stiffened and exsiccated condition, which unfits it for cultivation. Almost the only rock in the vicinity of San Antonio consists of rotten and fossiliferous limestone, much of which has become disintegrated on and near the surface, rendering the soil in some places almost incapable of sustaining vegetable life.

The land, for miles around the city, bears satisfactory evidence of having been under successful tillage, though many years have elapsed since the poor Indian, under the direction of the Catholic clergy, toiled and sweat, "for God's sake," I suppose, in the cultivation of these extensive fields, from which, it is said, in that day, the whole Red River Country was supplied with wheat. That dynasty has departed, leaving no trace behind, except the irrigating ditches and some venerable ruins, churches, convents, and mission houses, on which are plainly written by the pencil of time, "passing away." With the exception of two or three considerable ponds, within a mile of the town, in the course of the San Pedro, I am not aware that there are any local causes of disease in or around the city, unless they may be found in the circumstances and condition of the soil, which I have referred to.

The cholera prevailed in San Antonio, in terrific form and to a fearful extent in 1833. I have no means of calculating with precision the rate of mortality which attended its pro-

gress at that time; but, from all I can learn, its course was marked by appalling fatality, leaving such an impression on the survivors, and through them on their posterity, as induced them to flee precipitately from the city, on its late approach. The Mexican portion of the population hastened to the distant ranches in the country, or sought fancied security from the epidemic, by living vagrant lives, roaming they knew not whither, and caring not, if they could escape the raging pestilence!

The disease made its entry at San Antonio, about the middle of April. Approaching from an easterly direction, by the Lavaca Road, its advent was heralded by its victims among the California emigrants, on their way to join the government train, which was expected to leave for El Paso del Norto. The first cases were sparsely scattered through the city, and according to my observation, did not present the formidable front which the disease assumed, almost immediately thereafter. My introduction to it was made in the person of a servant girl, in our own family, who was abruptly seized with diarrhea, nausea, quickly lapsing into emesis, and cramps of the abdominal muscles and the flexors of the *upper* extremities. In this respect the case differed from a great majority of those which came under my notice subsequently; the muscles of the lower extremities being much more frequently, and often exclusively affected. The alvine evacuations in this case consisted at first of fœcal matter, but about the period when the stomach began to eject its contents, they assumed a serous consistence and in all respects the rice-water appearance. These characteristic discharges have been so frequently described, and are so perfectly identical, that I will not attempt any new illustration of their sensible qualities. It is sufficient to know, what was to have been anticipated, that they consist principally of the serum and albumen of the blood, exhaled or excreted from the emunctories and capillary vessels distributed on the lining membrane of the primæ viæ. The evacuations from the stomach were watery, and in a slight degree more pellucid than those from the bowels. The patient complained of epigastric angina, but no tenderness on pressure over the region of the stomach; the pulse was slightly

accelerated, and the skin moist; the temperature was equally diffused, no appreciable reduction taking place in the extremities, and no approach to corrugation of the integuments of the hands. The countenance was not perceptibly changed; the end of the tongue retained its normal warmth; the patient was not affected by mental emotion, nor was her pathological condition influenced or obscured by the panic which the name of cholera is too apt to excite; no urine was evacuated; she was restless, and clamored for drink.

The above hasty sketch will serve as a portraiture of some of the first and least pronounced of the cases which occurred, though I flatter myself that the lineaments of the disease are plainly discernible in the picture. Would that the disease had retained an aspect recognizable by the likeness I have depicted—for then I should have been saved the mortifying reflection that medicine is powerless, and human effort unavailing to stay its progress or avert its aim!

My medication consisted in the application of a large sinapism to the epigastrium, camphor water, tincture of opium and oil of peppermint, in repeated small doses, until the stomach became partially quiet, when I gave calomel 12 grs., opium 1 grain, camphor 2 grains—to be repeated immediately, if rejected; if not, give a pill, consisting of cal. and opium each half a grain, camphor 2 grains, every hour and a half—plain water, in moderate quantity, for drink. It was my intention in this case, to have resorted to the early use of opiate injections, and if necessary, to a strong solution of acetate of lead by the rectum, in conjunction with other remedies, if the disease had not readily yielded to the simple plan of treatment adopted. Suffice it to say, in reference to this my first case of cholera, that the patient recovered, and was engaged in the discharge of her proper duties forty-eight hours after my attention was first invited to her case.

The next subject of attack, which I will present as the representative of the class to which it belongs, was a German, passed the middle age, of grossly intemperate habits, who, in the midst of a debauch, and without any shelter from the weather, laid himself down in the stable yard of his employer to sleep off the effects of over stimulation. He was

seized sometime during the night with diarrhea and vomiting, quickly succeeded by cramps of the belly and extremities, and most tormenting thirst. Notice was not attracted to his case until about breakfast time, when I was invited to see him. I found him writhing in agony—the spasms recurring paroxysmally, at brief intervals, occupying the muscles of the thighs and legs—those of the abdomen, the upper extremities, and the larger muscles of the thorax. The evacuations from the bowels were large, frequent and involuntary, and the retching of the stomach frequent and distressing, though little or nothing was ejected. The pulse at the wrist was extinct; the beating of the artery yet perceptible at the wrist, though feeble and thread-like. The surface of the body was livid, the extremities cold, the integuments of the hands and fingers corrugated, the nails blue, the tongue cold, the countenance sunken and haggard, the respiration hurried. The short respite from the pain of cramps was wholly occupied in beseeching appeals for water. There was no urinary evacuation, no secretion of tears—apparently no salivary secretion to moisten the mouth and fauces.

Here was a case admitting of no expectant plan of treatment—no temporising course of medication! Indeed it was only necessary to view the case in its *tout ensemble*, to pronounce judgment upon the issue.

The patient was put into bed, and covered with warm blankets—active sinapsims were directed almost over his whole body—bottles of hot water were applied to his feet and legs—warm flannels to his hands and arms—hot brandy toddy, with aqua ammonia, and tincture of opium were given, and half drachm injections of acetate of lead were administered,—and as the vital powers succumbed apace, resort was had to enemata of warm diluted brandy—chicken tea, emulsion of assafœtida, etc. etc., whilst I sought to awaken the almost extinct susceptibilities of the stomach by occasional doses of capsicum and camphor, and quinine, and perchance the dormant excibilities of the liver, by fifteen grain doses of calomel. Under this regime, at the expiration of three hours, the patient's condition seemed to wear an improved aspect; pulsation was restored in the radial artery, the temperature of the body be-

came elevated and to some extent more equally diffused, the stomach retained the ingesta, the discharges from the bowels were less frequent, and smaller in quantity; the cramps were less distressing, and the patient, whose sensorial functions through the whole scene were unaffected, expressed himself better. I began to entertain faint hopes of his recovery, but hebetude of the mental powers supervened, respiration became more hurried, irregular and suspiratory, the circulation became more and more feeble, and without either vomiting, diarrhea or cramps during the last six hours of his life, he died, perhaps eighteen hours after the diarrhea began.

Cases bearing strong resemblance to the above, were frequent during the epidemic; for, alas! in this far off region, where, until lately, the binding force of morals and the restraining influence of Christianity were alike unheeded and disregarded, men ran riot in dissipation and incurred the penalties, sure to follow, sooner or later, the infraction of the laws of nature.

I will offer, in illustration of another variety of the cases, or perhaps of another grade of the disease, in some degree different, but not the less fatal, that of the distinguished victim of the epidemic to whom I have referred in an early part of this paper.

His bowels were habitually disordered. He had suffered for years with alternate constipation and diarrhea, and though he was rarely indisposed to such extent as unfitted him for active service, he deemed it necessary to resort frequently to gentle medicines—and it was perhaps this necessity which explains what would otherwise seem unaccountable—that the diarrhea which preceded the attack did not excite serious apprehension or alarm, as under the circumstances of his exposure we might have been expected.

The General complained of looseness of the bowels two or three days before the explosion of the disease in his system; indeed he had suffered from this cause whilst in New Orleans, and on his return thither, where he had arrived but a few days previous to the attack. He represented that the diarrhea under which he labored was *bilious*, differing in no respect, as I understood him, from that to which he was habitually sub-

ject. I prescribed strict attention to diet and regimen, and gave him pills of opium and calomel, the latter in minute quantities, to be repeated according to circumstances. On the morning of the day on which at evening the disease exhibited itself in its appalling character, I had added acetate of lead to the pills which he was taking. A short time before sundown he requested a friend to say to me that his discharges were more frequent and larger, and wished to know if he should disregard them, or if I deemed it proper to alter the prescription. I hastened to him; he seemed quiet and easy, and unalarmed, but informed me that he had had five or six discharges from the bowels within the last half hour, and that he thought them *colorless*. Up to this time he had visited the privy, but feeling an inclination to another motion, I prevailed on him to go into an adjoining room and use the chamber. I was alarmed at the sound attendant on the evacuation! I knew from the *manner* of the discharge that it was choleric. It was a sound that had become to my ears, as significant as the death knell—and almost as certain in its indication! For the pestilence had attained its acme, and I was but too familiar with the elements that enter into the diagnosis. At the close of this evacuation, vomiting occurred, and the patient was removed to bed. From this moment, the discharges became frequent from the bowels and the vomiting returned at short intervals, the former consisting of the characteristic rice water, the latter of the fluids principally which he had taken. Soon after he got into bed, cramp attacked the muscles of the soles of the feet, quickly extending to the flexors and extensors of the lower leg—the cutaneous tissue was relaxed and limpid perspiration flowed almost in streams from his whole body. The diarrhea and vomiting continued with progressive abatement up to 11 o'clock, P. M., (four hours after his undressing). His strength began to fail perceptibly immediately after the occurrence of the vomiting, and his voice was the *vox choleriæ*. The pulse became suddenly quick and feeble, the respiration hurried and anxious, the extremities lost their temperature, the surface became dark and livid, the nails blue, the intiguments of the hands and fingers corrugated, (he remarked this himself and directed my attention to it, and his countenance

for a time presented that dissolution of the features which is the peculiar effect of violent and malignant disease.

From the supervention of the vomiting, the thirst was distressing—the end of the tongue felt cold to the finger at an early period of the attack, and throughout the whole course of the disease there seemed an entire abolition of the office of the kidneys. I may here take occasion to remark, according to my observation, that a suspension of the urinary and biliary secretions *always* marks the advanced stadium of cholera—most other seperate and single symptoms, or conditions usually making part and parcel of the disease, may be absent, at times, or throughout its course; but I have never known a case in which either bile or urine has been voided after the supervention of alarming symptoms, except in the few instances of recovery, after incipient collapse, to which I shall refer hereafter, and a solitary case in which, at an advanced period, when all the diagnostic symptoms have subsided, copious bilious evacuations occurred and the function of the kidneys was restored, several hours before the patient's death.

In these cases, the restoration of secreton action in these important glands indicates a subsidence of morbid action, though in the last referred to, the vital forces were inadequate to support life after these terrible conflicts with the disease; they sustained the charge, and beat off the enemy, but exhausted their power in the encounter.

The course of treatment pursued in the case to which the foregoing remarks relate, as well as those generally, of which it is intended as the representative, may be stated in a few words. I had learned at this stage in the progress of the epidemic, that there are no known specifics for cholera. If I had been deceived by the bloated promises of any of the lauded plans of treatment which have been recommended, painful observation had disabused me of the error, and I was driven back on first principles in medicine, as likely to furnish the only reliable hope of success in the management of the disease. In dispair of striking at the root of the malady, I inquired after the indications, and adapted the remedies as best I could towards their fulfillment. I strove to quiet the irritable stomach by smart and extensive counter-irritation, and by that class of

medicine internally administered, which experience has sanctioned—the essential oils, the aromatic spirits, the carminative waters, the opiates in moderate quantity, Hoffman's anodyne, kreosote, &c., &c. I gave calomel in small doses frequently repeated, with the hope of securing its sedative effect, as well as its alterative action and its specific operation on the liver. I exhibited at other times, large doses of calomel and quinine, in the double hope of impressing the nervous apparatus of organic life by sedation, and exciting mercurialization of the system—I added at other times, separate or together, capsicum and camphor, with design to awaken the dormant or exhausted impressibility of the stomach, as well as to sustain the sinking powers of life. I resorted to astringent and opiate injections, with, I confess, the vague hope of controlling the frequency and quantity of the exhausting discharges from the bowels; and supporting agents were given by the mouth, rectum, and by inhalation, adequately apportioned, to arrest the ebbing tide of life, as excitability became extinguished. The preparations of opium came in for their full share of attention as agents having the power to equalize nervous influence when disturbed, or quiet it when preternaturally excited. To sum up the various methods of treatment pursued during the prevalence of the epidemic in San Antonia—"Regular and Volunteer"—I may say that with the single exception of chloroform, (which was not within our reach,) every article of medicine, and (with the exception of saline injections into the veins, and transfusion of blood,) every appliance "to boot," which have been recommended or used, was brought into requisition and adequately tested—and if now I were asked what is the most successful or approved treatment of cholera, I should be dumb-founded! Under my observation the vast majority of well developed cases has defied alike "the wonderous power of herbs, and might of magic spell"—for even charms and incantations have been resorted to in exorcism of the evil spirits that were thought to instigate it.

I would not be regarded as saying that *all* the confirmed cases of the disease that came under my notice, terminated fatally, but I do say, in a spirit of honesty and candor, that I very much doubt, in the language of Prof. Watson, "if the ag

gregate mortality from cholera (fully developed) was in any way disturbed by our craft." Recoveries ensued in rare instances, but the claim to cure rests on no better foundation than the fallacy involved in the maxim "*post hoc proper hoc.*" The few patients that recovered and the many that died were attacked in the same way—all the symptoms, and everything pertaining to their respective conditions, were, to all appearance at least, essentially alike. The patients were in the enjoyment of equal health, and seemingly in possession of like powers of resistance against disease at the period of invasion. The same course of treatment was pursued in numerous cases, from the beginning to the end of the disease, but the many died, whilst the very few recovered.

During the height of the epidemic, Major D., late of the Quarter-Master's Department of the army, was suddenly seized with diarrhea and vomiting, quickly followed by spasms of the legs and arms, and abdomen. His tongue felt "cold as a frog's belly"—his pulse became quick, weak, and finally extinct at the wrist; his strength quickly prostrated; his extremities were cold, and at the expiration of eight hours he presented a picture of collapse.

In conjunction with the customary remedies in such cases for the palliation of symptoms, I was giving him calomel, quinine and camphor every two hours, but, in consequence of an impression on the mind of the patient that the camphor made him vomit, I omitted that article and substituted in its place capsicum; whereupon (not necessarily *therefore*) the vomiting ceased, warmth returned to the surface and extremities, the pulse was restored at the wrist, the discharges from the bowels subsided, (to be followed in a few hours by bilious evacuations,) urine was evacuated, he threw aside the last will and testament which he had executed, and he recovered apace. But it cannot be said that the subsidence of the symptoms were due to the capsicum which I substituted for the camphor, nor to the combined action of the three ingredients of the prescription; for at that period of the epidemic I relied somewhat on the combination, and was giving it a fair trial, but failed to secure apparent advantage from its exhibition, in almost all cases.

In a preceding page I alluded to a case which terminated fatally, after large bilious evacuations occurred, and after the

kidneys were restored to their healthy action. This patient was very suddenly and very violently attacked. He came to me in person to advise that within the last hour he had been seized with diarrhea, and whilst he was relating his brief tale of symptoms, he felt so urgent a desire to evacuate the bowels, that he was obliged to retire. I followed him to his room, and was the witness of three or four profuse evacuations, in quick succession. He had not time or strength to rise from the bed, but advancing his body to its edge, the discharges were made into a chamber, held by an attendant. There is no exaggeration in saying that the dejections came with a force equal to the power of the largest size syringe, and in quantity amounted to at least a gallon in fifteen minutes. Vomiting supervened immediately, and profuse limpid transpiration covered the whole body. He lapsed speedily into a state of collapse. I pressed into service the small arms, as in ordinary cases, and erected a principal battery of calomel, quinine and capsicum, which was faithfully served for twelve hours. Most of the powders, after the first two or three, were retained, and, at the expiration of ten hours, I had the satisfaction of witnessing an improvement of his condition in every respect. The diarrhea subsided, the vomiting ceased, the surface became dry and warm, the cramps gave way, except at long intervals and in slight degree, the thirst was more moderate, the areolar and pillary tissues became again injected with red blood, giving fulness to the outline, and the patient himself began to entertain sanguine hopes of recovery. These signs of improvement continued for twelve hours, when the bowels were again moved, but the evacuation, instead of being white and watery, presented a dark green appearance, and had the consistence of thick gruel. He passed half a pint of urine, separate from the evacuation from the bowels. In this state of things the medicines were suspended, and in view of the extreme prostration of his animal powers, chicken broth and weak brandy toddy were allowed him. After a second passage similar in kind and quantity to the first, he began to sink, his breathing became hurried and irregular, his pulse failed, delirium ensued, and in spite of the most active stimulation by the mouth

and rectum, he died exhausted, thirty-six hours after the commencement of the attack.

This case furnishes the only instance under my observation in which death occurred after secretory action was resumed by the liver and kidneys, and one of the rare exceptions to the rule which determined the impossibility of restoring the abolished office of these viscera.

I cannot refrain from allusion to one other individual case of the disease which came partially within the sphere of my observation, because an incident occurred in its history which arrested my attention, and has been the subject of some after thought.

A young German, a porter in the store of a friend near by, was stricken down with the disease, and sent for me to see him. I started for his residence, but before I reached him, another and urgent message called me in another direction. He sent again and again, but my engagements prevented my attendance. I heard no more of him for several days, and, in the midst of suffering and death, thought not of him, or, if I did, uttered perchance a silent prayer for his soul, and was prepared to forget him. Ten days after the events referred to, he came into the store with rather sunken eye and blanched cheek, to report himself for service again. After he had enjoyed the friendly greeting of his employer, and witnessed with satisfaction the agreeable disappointment of all, he narrated the particulars of his case. When he failed to secure my attendance he sent for the "Dutch Doctor," who gave him two white powders, (calomel, I suppose,) with directions to take one, and, in the event of its being rejected to take the other. The first was immediately thrown off, when he took the other which remained. He was instructed to avoid water, on account of the constant vomiting, but his thirst was insatiable, and not to be resisted, and in a spirit of desperation, and with utter disregard of the advice of the doctor, and all ulterior consequences, he seized and drank a pailfull of *buttermilk*, which his wife had incautiously set within his reach. From that moment he began to improve; the sickness of stomach subsided; the diarrhea ceased; the cramps, which had been violent and frequent in the legs, arms and abdomen left him, and in his own language, he "got

well right off." When he reported himself at the store he complained only of debility and some considerable swelling of the ancles, from dropsical infiltration.

The points in this case are the large imbibition of the buttermilk, and the immediate amelioration of the symptoms *thereafter*, if not *therefrom* resulting. The serum lactis, and other animal products entering into the composition of buttermilk, are (one might think) admirably calculated to supply the waste occasioned by the evacuations from the stomach, bowels and skin, in cholera, and it requires no unreasonable tax on credulity to believe that under the circumstances, it might prove an important auxiliary in the treatment of the disease. The epidemic had nearly subsided when the use of the article was thus accidentally suggested to my mind, and I lost the opportunity of testing its claims to confidence by extensive trial.

Within the last few months I discovered that buttermilk was used, to some extent, as a curative agent during the late prevalence of the epidemic in Russia, and that it commended itself to favorable consideration.

I will here bring to a conclusion what I have to say on the history of the epidemic and the *Methodi Medendi*, somewhat Protean, as they were. If some of my patients died "over drugged," I have the consolation of believing that a less vigorous treatment would not have saved them; and if, in other cases, by an approach to the expectant plan, I suffered them to die, I have only to allege that allopathy and polypharmacy failed, in like circumstances, to rescue others from impending death.

It will be inferred, from the general tenor of this paper, that the disease, as it prevailed in San Antonio, was not only in a high degree malignant, but very fatal in its results. I have not the data necessary to furnish exact statistics in regard to it. The population of the city at the commencement of the epidemic may have exceeded four thousand, but became greatly reduced by the immediate departure of a large portion of the Mexicans, as well as many of the American citizens, and all the Californians, who had collected here in large numbers,

The deaths from the middle of April to the first week in June, have been variously computed, at from four to seven hundred. So pervading was the operation of the pestilence, that I am safe in saying no individual in the city fully escaped its influence. Every body complained of derangement of the stomach and

bowels, and it was subject of popular remark, as evidenced by the public and private privies, that the alvine discharges were universally deficient in the coloration which healthy bile imparts to them. Partial and irregular contraction of various muscles, particularly of the extremities, were exceedingly common among persons not otherwise considerably indisposed, and a feeling of lassitude and sense of depression was universally complained of. But, though the principal force of the morbific cause seemed to expend itself on man, the lower orders of the animal creation did not escape its operation. Pigs, chickens and turkeys, not only sickened and died in unusual numbers, but the medical physiognomy of their cases demonstrated the relationship, if not identity, of the cause in operation alike on man and brute. All were affected with spasms, often violent in degree, and, in many instances under my own observation, a profuse diarrhea of watery matter, closely resembling the rice water discharges of cholera in color and consistence, occurred. During the reign of the epidemic influence, fresh meats were observed to become putrid much sooner than usual. Mold formed on substances not under ordinary circumstances the seat of it, and everything conspired to indicate that some distempered meteorological condition existed, recognizable only by its effects.

In regard to the etiology of cholera, it might perhaps become me most to pass by it without remark, inasmuch as everything relating to it is hidden from my mental vision in arcana dark as midnight. Insurmountable objections, it seems to me, exist in reference to all the theories that have been conceived or promulgated in explanation of the *causus morbi*. If we examine even cursorily the several hypotheses, we find insuperable facts warring against the conclusions.

The animalcular theory might explain the phenomena, were it not that animalculæ could not withstand the severity of a Russian or Siberian winter. The explanation which ascribes it to a diminution of electricity in the atmosphere, might serve the purpose of solution of the problem, if the electrometer confirmed the alleged fact when and where the disease has prevailed, and if it were not true, as at San Antonio, that there seemed to be an undue quantity of that element in active existence, as was indicated by frequent thunder showers and more vivid lightning.

It might with some degree of plausibility be attributed to miasma, or whatever else it may be, that excites other febrile

epidemic and endemic diseases, but for the reason, among others, that it has not manifested any particular partiality for localities in which that mysterious and inscrutable agent is supposed to have its habitation and home, and where it makes display of its power in ordinary modes, and only at particular seasons.

I might proceed, in like manner, to refer to the whole catalogue of explanations, not forgetting that founded on cometary and astral influences, in relation to which it may be said, that such attempts to enlighten us are tantamount to admission of profound ignorance on the subject.

In my humble judgment, the only approach to plausible theory in regard to the obscure cause of cholera, and perhaps of epidemic fevers in general, is that lately propounded, or greatly enlarged and improved, by Prof. Mitchell, of Philadelphia, which ascribes them to the agency of cryptogami or fungi. During the prevalence of the late epidemic in this city, especially about the period of its greatest malignity, a phenomenon occurred which may hereafter be found to have an important bearing on an appreciation of all the facts and observations relating to the inquiry. At least utterly inexplicable at the time, it seems, under the light of Professor Mitchell's theory, more readily comprehended and explained.

I was informed that, for several days, the atmosphere some miles distant from San Antonio, was filled with *grasshoppers*, visible to the naked eye. I am not certain whether my attention was directed upwards by this intimation, or whether the discovery might not have been made many days sooner; but certain it is, a strange and astonishing spectacle presented itself to my vision. The upper regions of the atmosphere were crowded with myriads of specks or flakes, of varying dimensions and divers shapes, of a light slate or snow color, crossing each other in every direction, upwards and downwards, and laterally; all proceeding in a direction a little west of north, apparently impelled by the gentle breeze, which was blowing at the time from S.S.E. The lower stratum or edge of these floating muscæ seemed elevated some fifteen or twenty feet above the tops of the houses—the mass extending as high towards the heavens as the eye could reach, and was more distinctly visible in the direction of the sun's rays. This phenomenon continued many days after my attention was directed towards it—for aught I know, until the subsidence of the epidemic.

It is a subject of sincere regret, that I cannot state positively whether this singular appearance began, continued and ended with the pestilence. If the ingenious theory of Professor M. had met my eye in time, I should have found in it a strong inducement to prosecute diligently an inquiry in regard to the minute character of this infinity of floating objects in the atmosphere. My opinion, as expressed at the time, was that the objects belonged to the vegetable, not animal creation. I have witnessed an appearance somewhat similar, on a small scale, in the vicinity of a growth of cotton-wood trees; but this phenomenon is not thus explicable. There are no forests of such growth near San Antonio; and besides, the almost illimitable space occupied, forbids any such explanation of the occurrence. That they were a species of fungi, either developed on the surface of the earth and elevated into the higher regions of the atmosphere—or that the seminia cryptogami burst into life in the embrace of the mist or dew as it ascended, under the influence of an ardent sun, I am half inclined to believe. It may be pertinent to say in this place, that during the prevalence of the cholera in this country in 1833, the atmosphere was filled in like manner with grasshoppers—a fallacy that may have been encouraged by the fact, that the insect did abound *on the earth*, and added its ravages to the catalogue of evils that afflicted the people of this portion of the State—war, pestilence and famine.

Of the pathology of the disease, I will briefly discourse as follows: The symptoms indicate a profound lesion of the nervous apparatus of organic life. This condition is present *ab origine ad finem.* The stomach, the intestines, the liver, the kidneys, the skin—all the functions especially and directly under the control of the splanchnic system of nerves, are early and deeply implicated, as is evidenced by all the symptoms that confer diagnostic character on the disease; whilst the brain may remain intact and in the exercise of its powers, almost through the whole course of the malady, and the voluntary muscles exhibit only paroxysmal departure from health, when the excito-motory system of nerves, instigated by lesion of the great nervous centres, are thrown into spasms.

If it is true that the preparations of nux vomica have an elective affinity for the motor nerves which supply the voluntary muscles, and in adequate quantities can goad them on to disorganization, it requires no great stretch of the imagination to suppose that

the cause of cholera, of whatever nature, obtaining access to the economy through the blood, or other channel, may exert its primary morbific influence in the subversion of the healthy condition of that department of the nervous system which presides over the functions of nutrition, secretion and excretion—functions which seem in this disease so obviously and profoundly impaired. The accompanying and consequent departure from physiological action in other portions of the animal economy, not so immediately under the control of the grand division of the nervous system, may be readily explained by reference to that active sympathy which associates in intimate relationship every portion of the body, and makes the several parts a perfect whole.

But whilst we are so utterly in the dark in regard the causes and intimate nature of other pestilential and epidemic febrile affections, it is hardly reasonable to expect that cholera will unfold its essence or disclose its origin—for I doubt not, the demonstration which teaches us the secret of the one, will go far to enlighten us in regard to the mysteries of the other.

Is cholera contagious? I must disbelieve the evidence of my senses, before I can become a contagionist, in opinion or allow my judgment to waver or hesitate in coming to a conclusion on the subject. My mind is fully made up. Throughout the entire course of the epidemic in San Antonio, not a solitary fact presented itself that could in any wise give countenance to a suspicion that it was communicable from one to another. No household in the city, I believe, escaped an attack of greater or less severity, but in no case were whole families affected *seriatim*, as might be expected and as we are accustomed to observe when this property belongs to a prevailing disease. It is true that almost every individual in the community complained of derangement of the bowels and a feeling of malaise, but this only proves that all were within the sphere of influence of the prevailing cause of the disease, and furnishes corroborative testimony against the doctrine of contagion. I inhaled the expired breath of a majority of my patients, and found my hands bathed with their profuse perspiration. I minutely inspected their excretions and took part in the extensive frictions which were employed in the treatment of the disease. But one physician died of the epidemic, and he was not extensively concerned

in its management—nor were nurses, or those who were constrained by natural affection or cultivated friendship, to sit up with and administer to the wants of the afflicted, more liable to attack than those who never entered a sick chamber. I would appeal to the common sentiment of the community, for I claim for the public the right of judging where the evidence is so palpable, so easy to be apprehended. If it be said that the judgment of the people is not to be regarded in the question at issue, I beg leave to dissent from the proposition. The evidence, as I said before, pro and con, is strictly within their comprehension. They are deeply, vitally interested in a proper appreciation of the facts as submitted to their attention, and I do contend that where universal popular sentiment tends strongly to a conclusion, in such a case as the present, it is entitled to regard, and goes far to establish the truth of the proposition which it affirms.

I will close this communication by remarking that I fear those physicians deceive themselves, who maintain that cholera is always readily cured, "if taken in time." Numerous cases of the disease occurred in San Antonio, where no "time" was allowed for successful medication. Sometimes no premonitory diarrhea heralded its coming; and in some instances, no evacuation from the bowels occurred through its entire course to a fatal issue—the first departure from health being announced by a sense of sinking, nausea, vomiting or retching, and cramps, speedily followed by collapse and death. It is not fair to regard all the cases of diarrhea that occur during the epidemic prevalence of cholera, as instances of the disease to be set down in the catalogue of cures or prevention; for we had scores of instances in this city of the spontaneous subsidence of the looseness of the bowels, often in spite of irregular habits of living, of eating and drinking, and exposure, where not a grain of medicine was given. It is to be feared that the statistics of "cholera cured," too often include cases of what is conveniently called, and sometimes ostentatiously paraded as "cholera," which, according to my learning, signifies a slight relaxation or irregularity of the bowels, which usually precedes the full development of cholera, but which, in nine cases out of ten, *might* subside spontaneously. These cases may, I think, more properly be regarded as evidence that though the individual is not wholly exempt from the opera-

tion, in a slight degree, of the cause of the disease, he lacks the predisposition or susceptibility necessary to give it full force and virulence.

We hear of professional men who cure all their cass of cholera, or at least a very large per centum of their patients—I am persuaded that either the disease within the limits of their practice wore a mitigated aspect very different from that which it assumed under my observation; or that the term "cholerine" would serve a more honest purpose, as the exponent of its form and character.—*Quod probat nimium—probat nihil.*

While a great majority of the cases of diarrhea for which I prescribed, speedily subsided under the use of gentle stimulants, sedatives and astringents, many were utterly uncontrollable, though combatted "in time"—at least early—by all the means at my disposal. Who can say that the former would not have terminated *sua sponte* in health, and why were not the latter amenable to medication? Verily, verily, there are things pertaining to the principles and practice of medicine, which are involved in some degree of obscurity—even in this nineteenth century—and nothing less than "light from heaven," will enable us to write after our explanations in regard to many of them—alas! too many!—*Quod erat demonstrandam.*

The small-pox followed in the wake of cholera, and has prevailed as an epidemic in San Antonio, up to the moment of this writing—the same loathsome disease which sat for the pictures drawn of it by the fathers of the profession.

REPORTS FROM TEXAS.

ARTICLE II.—Report on the rise, progress and decline of epidemic cholera in the valley of the Rio Grande. By N. S. Jarvis, Surgeon U. S. Army, stationed at Fort Brown, Texas.

Deeming that all information connected with the rise and progress of the cholera in different places throughout our country, may prove interesting, if it should not possibly throw any additional light on the nature and mode of its propagation and extension, has induced me to give a brief history of its first appearance on the Rio Grande and among the troops stationed at this port, together with a succinct statement or account of its rapid and fatal career, gradual declension and final disappearance.

My residence in the city of New York in 1832, during the whole period of its prevalence there, made me familiar with the peculiar features and character of the disease; and my subsequent sojourn in New Orleans during the period of its greatest severity, on its introduction a second time in December last, made it a very easy task to recognize once more this terrible and afflicting scourge.

The first case I met with was on the 22d of February, in the person of a tinner, by trade, living in the upper part and outskirts of the town of Brownsville, called the "Resaca," consisting of a cluster of sheds and shanties, and inhabited mostly by mechanics and laborers. Its situation was lower than the town, directly on the bank of the river, and neither remarkable for regularity or cleanliness. The houses were built on a second plateau or lower formation of the river bank, and at periods of high water and the annual rise of the Rio Grande, was subject to overflow and inundation for a considerable length of time.

From this point it spread out in every direction, the cases of disease rapidly increasing in number and intensity until the Monday following, when it may be said to have reached its greatest height and severity. Nearly fifty deaths took place on these four days, the mortality being more than one half of the whole number attacked. When it is considered that these occurred in a population at the time not exceeding 700 souls, it exhibits a degree of fatality well calculated to inspire terror and spread dismay among the surviving population. This at the time of the first breaking out of the epidemic must have been nearly 1200 souls. This excess above the permanent inhabitants of the town consisted of a transient or floating population always found in a new and rapidly increasing town, and especially on a frontier, consisting of California emigrants, travelling merchants and traders, gamblers, Mexicans, &c., who fled on its first approach, some crossing over to Matamoras, while others took passage in steamboats passing up and down the river, or went into the interior of the country to escape its ravages, and with a hope of getting beyond its influence. As I considered it my duty to apprise the authorities of the town of the true character of the disease, on its very first appearance, in order to enable them to take such precautions and make such preparations as the nature of the disease demanded, these people had timely intimation of its approach, and an opportunity afforded them of fleeing beyond the immediate circle of its influence at the time, to encounter it however at some other point and in many instances succumb under its fatal grasp. Many men sickened and died when but a few miles from the place, and were buried by the side of the road, or in some obscure ranche, while others had sufficient strength to return and die among their friends. They had already imbibed the fatal poison, and a favorable circumstance or exciting cause was only wanting to develope it in all its malignancy. In a party of California emigrants, the night following the day of their departure a sudden change of the weather so common in this climate, produced by what are called "Northers," took place, and these men being exposed to the chillness of the night, were seized before morning with all the symptoms of cholera, and four of their number died, either on the road or shortly after they were brought in by their comrades. Another party were exposed to a shower of rain, and shortly afterwards three or four of their number were in like manner seized and fell victims to the same disease.

These instances show that the victim had previously contracted the disease, or come under its influence while in Brownsville, and exciting causes as above related, were alone wanting for its full development. It never extended at the time beyond those thus exposed, and the Mexicans inhabitating the ranches where these cases occurred, escaped entirely at the time, and only became obnoxious to its attacks, and fell victims to it as it subsequently enlarged the circle of its influence, and extended as from a common centre in the town of Brownsville, its fatal poison in every direction. The long presence of this disease, or at least the peculiar elements necessary for its production, contracted at some distant point where it was prevailing at the time, many days afterwards burst forth with the greatest fury the moment an exciting cause, as either of the above related was applied, and may not unaptly be compared to some smouldering or highly inflammable matter, only wanting a spark to kindle at once into flame and consume everything in its devouring course. Such was the case with the 8th Regiment of U. S. Infantry, which embarked in two detachments from New Orleans about the 15th of December, for Lavacca in Texas. At that period the cholera no doubt prevailed in that city, but the fact was not generally known, or was concealed from doubt or uncertainty as to the true character of the disease, and it was not until after their departure that the authorities were constrained to acknowledge to the public the existence of this fearful epidemic. These troops arrived at Lavacca on the 17th, in perfect health, and encamped in the neighborhood. On the 21st, a detachment of 150 men marched for Placido creek, a distance of 12 miles, and encamped; the balance of the command, consisting of nearly an equal number, remaining at Lavacca. The same afternoon a severe Norther sprang up, accompanied by a chilling rain, and the only shelter they had against the severity of the weather, was that afforded by their tents; sleeping on the damp ground with a single blanket intervening, which soon became saturated with moisture, and without fire or the means of procuring it. During the night the cholera broke out in both detachments, and by daylight the next morning, 8 or 9 of the detachment on Placido creek had perished from the disease, and upwards of 40 in the detachment at Lavacca. It prevailed for a period of 7 or 8 days, in that time destroying nearly one half of the whole command. This, including camp followers, was 350 souls and upwards, of which 150 died, a de-

gree of mortality rarely if ever exhibited before in so short a period of time, from this disease or any other epidemic. Here, causes the most favorable for its development, cold and moisture, combined probably with brackish water, all concurred in giving force and intensity to the disease, the seeds of which were already in their systems.

Notwithstanding, as we have just seen, the fatal character of the disease among the soldiers and followers of the camp, none of the citizens of the town or vicinity, as far as I can learn, were attacked at the time, and it was only subsequently and after an interval of some months, that it made its appearance as an epidemic among the inhabitants of Lavacca and Indianola, a small town 10 miles below and situated on the same bay with the former. It reached these places from San Antonio, where it broke out about the 10th of April and proved extremely fatal, carrying off in the space of 60 days some 300 of the inhabitants of the town and neighborhood. The population of San Antonio was estimated at between 3 and 4,000 persoms, but the greater part of them fled on the approach of the cholera. This evidently followed the same detachment of Dragoons which brought it to Laredo from Camp Ringgold. They left Laredo the latter part of March, and arrived at San Antonio on the 1st or 2d of April. No cases had occurred at this place previous to their arrival. What is somewhat remarkable, it is said to have been equally severe in this place on its first appearance in the country in 1833. No known or assignable cause, as I am aware, exists, to which may be ascribed this unusual prevalence and severity of the disease compared with many other towns in Texas, which in ordinary seasons can neither boast of the same salubrity of climate or absence of all local causes usually productive of disease. Situated on the San Antonio river, a clear and rapid stream, which takes its rise from a number of springs in the immediate neighborhood, it consequently is not subject to the annual inundations of most of the rivers in Texas, which frequently cover large tracts of country with water, and in drying up leave behind a fruitful source of malarial and miasmatic disease. An open prairie immediately surrounds the town, with neither hills nor woods to intercept the prevailing winds constantly blowing during the summer months. Any deletereous emanations arising from local causes and generated within the town, must constantly be driven off,

and would lead us to acquiesce at once in the opinion, that this place has always enjoyed of being one of the healthiest towns in Texas.

Yet notwithstanding this apparent absence of all known causes that are supposed productive of disease, and contrary to all the laws supposed to govern the rise and progress of epidemics, we see this town suffering more severely from cholera than most others in Texas, which were known to possess in an eminent degree all the materials necessary for the propagation of almost every form of epidemic or endemic disease. The same laws, therefore, that govern the latter, or give rise to their existence, although they may and do in most cases probably aggravate its character, must be independent of any direct agency in the production or extension of cholera.

But as I started with the determination of not adverting to any of the numerous theories as to the nature and source of this disease, or venturing any opinion of my own, I shall therefore confine myself to relate such facts regarding it as I personally know, and leave to others to make such inferences, or form such deductions as they please from them. About the same time the 8th infantry left New Orleans for Lavacca, the Mexican spy company commanded by Colonel Dominguez embarked in a schooner for Brazos Santiago. They had been residing since the termination of the war, in the neighborhood of the barracks below the city, where a number of them, as I understand, had died from yellow fever the preceding summer. On their voyage out, several more were taken sick and two or three died with symptoms of what was supposed at the time to be cholera morbus, or derangement of the stomach, arising from sea sickness. Two or three of their number died after their arrival, with nearly the same symptoms, without exciting at the time any suspicion among themselves or the inhabitants of the place, that the disease under which they labored was Asiatic cholera. As they left New Orleans before any cholera was known to exist there, or even in the United States, it would not at all appear surprising they should not suspect its existence among themselves, and would be likely to imagine it any other disease, and ascribe it to any other cause than the true one. Whatever may have been its character, and I think there can be little doubt of its having been the true Asiatic cholera, it never spread beyond these people, and as we have seen it in the 8th Infantry confined exclusively to

those who brought it over, and had been exposed to its influence in New Orleans. These instances may be considered sufficiently conclusive to show that other causes or conditions are necessary for its propagation as an epidemic than its mere existence among one or more persons coming from distant points where the disease existed at the time, and that certain elements or materials must be present for its general diffusion. Whether these are generated in the atmosphere or are emanations from the earth, chemical changes in the constituents of air or water, of animalcular, vegetable, or magnetic, or electrical origin, I leave to others to decide, contenting myself, as I have remarked above, with the mere relation of facts, which, however unimportant in themselves, may possibly, in connection with the observations of others, help to throw some light on future investigations after the true causes of this mysterious disease.

I shall now proceed in my relation of its progress and decline at different points in the valley of the Rio Grande, and as far as information could be gleaned from reliable sources, its mortality at these places. We have seen that it made its first appearance at Brownsville, on the 22d of February, and it was not until eight or nine days after, that it made its appearance at the mouth of the river and at Brazos Santiago, where it continued to prevail to the 9th of April. In the latter place, during the period, upwards of 76 persons perished out of a population not exceeding 150 souls, or more than one-half of the whole number; a mortality nearly equal to that of the 8th Infantry. Of this number, two belonged to H company 4th artillery, and nine were persons employed in the quarter-master's department as laborers; the balance being citizens of the place or persons who had fled from Brownsville to escape the disease. It made its appearance at Matamoras on the 2d of March, nine days after its appearance at Brownsville, on the opposite side of the river. It continued to prevail in this place for a period over six weeks, and in that time carrying off upwards of 600 persons in that town and its vicinity. When it is borne in mind that this mortality occurred in a population not exceeding 4 or 5000 souls, it may be justly considered as exceedingly fatal and severe. A necessary degree of inaccuracy must accompany all statistical information derived from Mexican sources, as to its comparative mortality on that side of the river. No statement or reports were called for from the

Mexican authorities, neither were hospitals established for the reception of those attacked by the disease, and not one-third of the number who died were ever attended upon or seen by a physician. The poor creatures in many instances were satisfied with the occasional sprinkling of holy water, the repitition of some prayer or invocation to their protecting saint, in the absence of medical aid, which their poverty precluded them from employing, and the same cause induced their friends frequently to bury them in obscure places to avoid the expense of burial in the Campo Santa, and the penalty for not so doing. The statistics of burial in the former place, as kept by the sacristan or sexton, amounted to 430. Add to this the number 170, supposed to have been privately buried, we will have an aggregate of 600 persons, in a population not exceeding 5000 souls.* Here, as in other places or towns in Mexico, the greatest mortality was among the lower and poorer class, inhabiting dark, ill-ventilated jircals or huts in the outskirts of the town. Crowded as these were with all ages and sexes in a limited space, living frequently on most unwholesome diet, and subject to almost every kind of exposure, the only surprise is, not that so many died, but that so many escaped. Fortunately there was but little fruit or green vegetables of any kind in the market at this time, but if such had been the case, knowing the extravagant indulgence of these people in such description of food, it would be difficult to say how large would have been the mortality. During the season and growth of watermelons, the poorer class seem to live entirely upon them, eating them from morning until night, and seemingly desiring no other kind of food. Add to this their scanty and imperfect clothing, and we have two known and assignable causes for di arrhea and other bowel complaints.

The disease arrived at its greatest height about the 16th of March, and from that period began to subside, and finally disappeared on the 26th of the same month, prevailing for a period of 26 days. After attacking different ranchos and settlements on each side of the Rio Grande, it reached Reinosa, the first town of any size above Matamoras, on the Mexican bank of that river, on the 10th March, and was supposed to have carried off fifty of its inhabitants, which were estimated at 1500 souls. Among the num-

* The population of the town itself did not exceed 3500 souls. The greatest mortality out of this number any one day, amounting to 69 persons. For ten days the number of deaths averaged from 40 to 60.

ber was an American physician, the only practitioner in the town. Travelling rapidly onwards it arrived at Camargo, a distance of fifteen leagues from Reinosa, on the evening of the 2nd of March. Camargo is situated on the San Juan river, the first affluent of any size that flows into the Rio Grande, and the water of that river presents a totally opposite character to that of the latter, being clear, of a bluish color, apparently strongly impregnated with lime, and containing considerable quantities of vegetable matter. This water, in addition to its insipidity, exerts a deleterious effect on all those who drink it, and the army, which lay encamped on its bank in the neighbourhood of Camargo, in the summer of 1846, for more than a month, suffered severely from diarrheas and dysenteries, owing in a great measure to drinking it. In like manner the troops that constituted the garrison of that town at different times during the continuance of the war were effected from the same cause. Water charged with these noxious qualities could not fail to exert a fatal influence on the advent of the cholera, and we accordingly find it much more severe in this place than in others, on its route into the interior of the country. Between 300 and 400 of the inhabitants, out of a population of 2000 in the town and adjacent ranchos, are supposed to have perished in a period of 30 days from its commencement. Of eighteen foreigners, composing part of its resident population, nine died, just one half of their number. From Camargo it reached Mier, a town situated on a small stream called the Alamo, which empties into the Rio Grande three or four miles off, and distant from the former place about ten leagues, on the 1st of April. It has a population of nearly 2,000 souls, out of which 100 are supposed to have perished.

It broke out at Camp Ringgold, the first military post above Fort Brown, on the Rio Grande, and only four or five miles distance from Camargo, on the morning of the same day it made its appearance at the latter place. Consequently, only a few hours intervened between its attack at these two places. It seemed to have reached there simultaneously by land and water, for about the same time the steamboat arrived from Brownsville which had several cases and deaths on her passage up, a train of waggons arrived from the same place with a number of cases, including the wagon master, who died after his arrival into camp.

On the 13th of the same month a company of California emigrants came up in the same steamboat (Corvette) that had pre-

viously, as we have seen, brought up the disease. They encamped on the Mexican side of the river, just above the barracks, and opposite Rio Grande city. From that place the greater part of them afterwards proceeded to Rome, a few miles higher up the river. Of those that remained behind nearly one tenth were carried off by the disease. Of this number was Dr. R. Kearney, from the city of New York, represented as a young physician of highly respectable attainments and amiable character, who accompanied the expedition as medical adviser. He remained a few days behind at New Orleans, to complete his outfit, and subsequently rejoined it at this place, where he was attacked a few hours afterwards and fell a victim after a very short illness. This company, like many others, broke up on the appearance of the cholera among them, part returning home and the remainder, less disheartened or more ardent in their pursuit of gold, continuing on their journey to California. Connected with the sojourn of the company at this place, a case is mentioned of so remarkable recovery from cholera, under the most adverse circumstances, and apparently in spite of the very means which might reasonably be supposed to have induced a fatal termination, that I may be pardoned or excused for relating it here. Shortly after their arrival the treasurer, or person having in charge all the funds of the company, amounting to some $4,000 in gold, beside a considerable amount belonging to individual members, entrusted the bag containing it to the bar keeper of the tavern at Rio Grande city, for safe keeping. When called upon for it he asserted that some person belonging to the company had previously demanded it, to whom he had accordingly delivered it up, but was unable to identify the individual. The whole company, fully impressed with a belief in the falsity of this statement, and indignant at this breach of confidence and barefaced rascality of the man, seized him at once and carried him to their camp, where he was chained to a log, and three or four armed men set to keep constant watch over his actions. Their design was to extract some confession if possible from him, in reference to the missing funds. They indulged a hope that the fear of summary punishment or threatened death might force him to make some acknowledgment or revelation as to his agency or participation in the robbery. Fortunately, what their efforts failed to accomplish, an attack of cholera brought about. After being exposed to the burning sun by day and

chilling dews by night, without any shelter, or covering, or food, he was seized with the disease. No attempts were made to alleviate his sufferings or to administer remedies of any kind. The company, seeing in the loss of their money a final stop to their further progress onwards, and consequent disappointment to all their glittering hopes and golden dreams, felt justly exasperated against the man whom they considered the cause of all, and left him to die a death they deemed worthy of his crime. Some one more kind than the rest, and moved by the supplications of the criminal for water, set a bucket full before him, probably supposing that the free and unrestrained indulgence of it might, in all probability, shorten the period of his life and sufferings. Another, yielding to his request, gave him a bottle of claret, which he finished nearly at one draught. After drinking quart after quart of water, the man began to revive, and finally recovered, not however before acknowledging his guilt of the theft, and revealing the names of his associates as well as the place of concealment of his portion of the stolen money. Here we see a recovery under the most untoward circumstances, and without the use or application of any remedial means whatever, unless the water and claret may be considered of this character, and it is exceedingly doubtful whether this was given with any expectation of such a result or benficial effect.

At Rome, a little town 3 miles above Ringgold Barracks, on the river, it broke out about the 11th of March, carrying off in a short period upwards of 70 of the inhabitants. Its mortality was less here, from the circumstance that most of the population of the place fled on its first breaking out, leaving the place nearly desolate. Out of 35 American residents in the place, 15 died.

On the 11th of March, a squadron of United States dragoons left Camp Ringgold for San Antonio de Bexar, via Laredo, a town situated on the Rio Grande, 140 miles distant from the first named place. They had previously lost several of their number from cholera while at the barracks, and subsequently lost several more on their route to Laredo. Shortly after their arrival there, the disease broke out among the inhabitants of the town and a company of infantry that had arrived some time before to garrison the place. It continued to prevail at this place for a period of nearly 60 days, and is supposed to have carried off in that time about 100 of the inhabitants of the town and vicinity, out

of a population of 1600 souls.* Laredo may be considered the extreme limit of the settlements on this river within the confines of Texas. To Presidio Rio Grande, a distance of 130 miles farther up, nothing but a wilderness intervenes, and, consequently, our knowledge of its progress up the valley of the river terminates at Laredo. The only town of any size on the Mexican side of the river, between Laredo and Rome, is Guerrero, containing a population of about 2500 persons. Here its effects were, however, much less severe, the number of deaths being estimated not to exceed 80, and the whole number of cases at about 200.

About the same time it was pursuing its destructive course up the valley of the Rio Grande, it was also traversing the two great routes of travel into the interior, towards Monterey and Saltillio, by the roads leading from Matamoras, through China Cadareto, and the more northerly one through Mier, Serralvo and Marin. In all of these towns its ravages were more or less severe, as well as in the numerous intervening ranches or villages found scattered on both roads. It reached Monterey between the 16th and 20th of March, and Saltillio, 70 miles farther south, in the latter part of April. The population of these two towns is nearly equal, each supposed to contain about 6000 souls. Its ravages in Monterey† and its neighbourhood were, however, much less severe than at Saltillio, which circumstance may doubtless be ascribed to the superior cleanliness and acknowledged salubrity of climate the former enjoys over the latter. In Saltillio the houses are nearly, if not all, built of adobes, or sun-dried bricks, with earthen floors, always dark, damp and ill ventilated. On the contrary, those of Monterey are mostly built of stone, with cement or brick floors, better ventilated, and combining more comforts and exhibiting a greater degree of cleanliness than are to be found in the houses and huts of Saltillio, especially the Puebla or Indian part of the town, where the poorer and more miserable class of the population reside. Again, the climate of Monterey, notwithstanding the short distance they are apart, is greatly milder and less liable to those frequent alternations of temperature which are so common in Saltillio. This may be readily accounted for from the fact that Saltillio is ele-

* 11 deaths in Company G, 1st Infantry, constituting the garrison of the place, is not included in the number.

† The number said to have died at Monterey is 400; at Satillio 500. It prevailed in both of these cities 30 days.

vated nearly 2000 feet above the level of Monterey, and situated in a valley or gorge of lofty hills or mountains; the winds most seasons of the year rush through with great force and violence, subjecting those who reside there to frequent and sudden changes of climate, according to the direction they are blowing at the time. Monterey enjoys an equable climate and a delightful temparature most of the year, and a broad open plain extending in front, and bounded only by the distant mountains of Serralvo and two broad valleys leading west and south towards Saltillio, and afford a free and abundant ventilation, moderating the otherwise excessive heat reflected from the bare and rocky mountain that encloses nearly three sides of the town. The difference of temperature between Monterey and Saltillio is also seen in the comparative growth of fruits and other productions in the two places; for, while the pear and apple thrive at the latter place, only fruits of the tropical region, viz.: the orange, lime, pomegranate and bannana, are found in Monterey. More than a year's residence in the latter city impressed me very favorably with its climate and general salubrity. The dryness and serenity of its atmosphere, its cloudless sky, the delicious temperature of the nights, and the beauty of its landscape, all combine to render is a desirable spot to reside in, to the invalid as well as the lover of the picturesque.

From Monterey and Saltillio the disease travelled rapidly onwards, south, into Zacatecas, west and north into Durango, and Chihuahua, hardly a town or hacienda in these States escaping its ravages. But as I started with the intention of giving only a brief history of its progress in the valley of the Rio Grande, I will not at this time transcend the prescribed limits in following its path into those distant states, and recording, as far as information could be collected, the mortality in different places. At some future period, when I am enabled to obtain more accurate knowledge and reliable information touching its further progress into the interior of the country, from those residing in these places at the time, I may undertake the task, but at present, from the limited and imperfect acccounts we have, such a relation would prove unsatisfactory to myself and the reader. Computing the population of the valley of the Rio Grande, from its mouth up as far as Laredo, at 20,000 souls, and judging by the relative mortality in places whence we could derive accu-

rate information, we may safely set down the total number of deaths from cholera at 2,000, or 10 per cent. out of the whole number. It is true that in many places, particularly the towns, it was nearly double this number, but in the country, where causes less favorable for its production and propagation existed than in the dirty and crowded huts of the poor, always constituting the suburbs of every Mexican city or town of any size, we may set it down as rarely exceeding that proportion; and taking into the calculation that entire escape of some districts, 10 per cent. would be a correct estimate of the number of deaths. This would be a mortality sufficiently afflictive and appalling, and one that could not but be productive of apprehension and alarm in the breasts of all who were there at the time, and a feeling of gratitude to a merciful Providence that they were spared the death they had been called so often to witness, of friends, companions and relatives.

Fort Brown, Texas, January 27, 1850.

EXCERPTA AND MISCELLANIES.

HAVING completed our Reports from the different States, we are warned by the heavy expense necessarily incurred at the commencement of this work, to bring it to a close. It will be seen that but three of the States included within our periscope have failed to respond to our first invitation, viz., Florida, Arkansas and North Carolina. In justice to Florida, we may remark, that we received a communication from our esteemed friend, Surgeon Isaac Hulse, U. S. Navy, at Pensacola, but it related to matters a little too far back to suit our purpose. We have not the least doubt that each of these States will be duly represented in our second volume.

We take this occasion to acknowledge our indebtedness to Dr. Samuel George Morton, of Philadelphia, for the following interesting brochures from his able pen:

1. "Catalogue of Skulls of Man and the Inferior Animals, in his collection."
2. "Observations on the Size of the Brain in various races and families of Man."
3. "Additional Observations on a new, living species of Hippopotamus of Western Africa (Hippopotamus Liberiensis.")

These works have been duly noticed in the scientific journals both in this country and Europe, and add fresh honor to the fame of our distinguished countryman.

We have also received interesting addresses from the following Professors: J. Knight, M. D., of Yale College; Paul F. Eve, M. D., of the Georgia Medical College; N. S. Davis,

M. D., of Rush Medical College; J. D. B. Debow, of the *La. Bureau of Statistics;* W. M. Boling, M. D., of Transylvania University; and the Annual Address to the Alabama State Medical Association, by W. O. Baldwin, M. D. For all which we return thanks, and regret that we cannot notice them as their merits deserve.

We had intended to give one of the extraordinary *Contributions to Physiology* constantly emanating from the prolific pen of our fellow-citizen, Dr. Bennet Dowler, of New Orleans, but we cannot do so. They are published in the *New Orleans Med. and Surg. Journal,* and will amply repay the trouble of perusing them. We trust the worthy and talented author may long be spared to continue his curious and interesting investigations.

We can only make room for the following *excerpta* relative to two of the most important remedies used in the treatment of Southern Fevers:

I. Experimental Researches on the action of Quinine, especially in large doses. A Memoir submitted to the Academy of Science.—By M. Brecquet. Report of MM. Andral, Rayer, and Lallemand.

M. Brecquet records the effects on the principal organs of the animal economy, of sulphate of quinine, in doses of fifteen grains and upwards. His experiments have been made upon living animals; to these he adds observations on patients to whom he has administered the remedy in the above-named doses.

1. *Effects on the organs of circulation.*—These were of two kinds,—first, as regards the frequency; secondly, as regards the force of the pulsations of the heart. The frequency of the pulse was variously reduced from eight to forty beats in the minute.

Alterations in the force of the heart's action were observed by the aid of M. Poisseuille's hæmadynamometer applied to the carotid artery of animals, in whom at the same time solution of sulphate of quinine was injected into the left jugular vein. Varying with the quantity injected, the force was observed to be diminished from a seventh to a tenth, a fourth, a third, a half; and at last, on injecting thirty grains of the bisulphate in about four ounces of water, all pressure disappeared, the heart's action ceased, and instant death by syncope ensued. These effects were observed to follow regularly, whether the quinine were administered by injection into the vessels, by the stomach, or by insertion into the cellular tissue.

2. *On the nervous centres.*—Injected directly towards the brain by the carotids or ascending aorta, great cerebral excitement and convulsions were produced. If the quinine reached the brain by the more indirect route of the general circulation, agitation, headache, vertigo, tinnitus aurium, paralysis of the nerves of the special senses, muscular twitching and subsultus tendinum, apparent intoxication, then general

collapse and loss of voluntary power. Dissection generally disclosed great congestion of the brain and its membranes, and even meningitis.

3. *On the organs of respiration.*—No appreciable effect was observed, except what might be referable to the slower propulsion of the blood by the heart.

4. *On the digestive organs.*—Inflammation of the mucus membrane, attended with its usual symptoms, though not generally of a severe character.

5. *On the urinary apparatus.*—Pain, frequent micturition, hæmaturia, dysuria, and retention, have been noticed, but always in a slight degree.

6. *On the organs of generation.*—Uterine hæmorrhage of the female, and debility of the organs in the male.

7. *On the skin and the subcutaneous cellular tissue.*—Numbness and coldness of the surface, ecchymosis and petechiæ, more or less extensive.

8. *On the blood and other animal fluids.*—When blood drawn from the vessels was placed in contact with solution of quinine, it became liquefied, and the globules were destroyed; but in order that such effects should take place in the living body, the presence of a much greater quantity than can be taken by the stomach would be required. Animals poisoned by this medicine did not present this liquid state of the blood, but an increase in the proportion of fibrin was found. No trace of quinine could be found in the milk or mucus secretions.

The absorption and elimination of quinine in reference to its therapeutical employment, was ascertained by noting the period at which a precipitate appeared in the urine, on the addition of the bi-iodide of potassium, and by observation of the symptoms referable to the nervous system. Thus it was observed that the sulphate in doses exceeding three grains is absorbed in from half an hour to two hours, and produces its physiological effects in another hour. These will continue for about half an hour. A dose of fifteen grains in six hours continues to manifest its influence for from five to six hours. Thirty grains administered in two hours, produce symptoms lasting from twelve to fifteen hours. When the sulphate has been administered for several days, the effects continue many days after it has been withdrawn. The medicine is completely eliminated at the end of ten or twelve hours after small doses, and in about forty-eight or seventy-two hours after large doses.

Women and children are more susceptible of its influence than men; and the stature and strength of the individual modifies its effects. Loss of blood increases also its influence, diminishing its stimulating, and increasing its depressing action. Opiates act in a similar manner, while alcoholic stimulants have a reverse operation.

In reference to its therapeutic properties, M. Brecquet found that the sulphate is the most active of all preparations of quinine; that the alkaloid itself has an action identical with the sulphate, as has also cinchonine, but the latter is by one-third less powerful; that quinoidine has the same action as quinine on the nervous system, but is much more irritating to the alimentary canal.

M. Brecquet found the solution of the sulphate more active by one-half than the same compound in the dry state. Administered by enemata, absorption was found to take place more rapidly than when it was given

by the mouth, but the effects lasted a shorter time, and the alkaloid scarcely produced its physiological action. Employed for frictions, ointments, lotions, and other endermic methods, the absorption was very feeble, and no physiological action whatever could be traced.

The physiological and therapeutical effects of this medicine were more regularly and powerfully obtained by its administration in repeated doses; its exhibition therefore requires to be continued for a certain period.—*Lond. Med. Gaz., from Competes Rendus.*

II.—On the treatment of the West India Remittents and Intermittents by Quinine. By Dr. D. Blair, of Demarara.

When quinine is taken by an adult to the extent of thirty or forty grains, it produces certain cerebral symptoms, the constituents of which are a ringing noise in the ears, and more or less deafness. This set of symptoms, where there is no idiosyncrasy, indicates the saturation of the system by the medicine, as ptyalism does by mercury, and may be conveniently known by the name of *cinchonism*. Rare instances occur in which hyper-cinchonism is induced by a very few grains of quinine, accompanied by many nervous symptoms, and formication so severe as to proscribe the use of the remedy. In some—and this may occur in cases which had hitherto been normal—cinchonism has not been induced till after the administration of seventy-two grains of quinine. Cinchonism is not peculiar to quinine: by other vegetable febrifuges, such as salicine, angustura bark, and beberine, cinchonism can be induced, but not with the same certainty as by quinine, neither in the same uniform series of phenomena, neither with the same harmlessness. Cinchonism seldom lasts longer than twenty-four hours, except in some cases of anæmia, in which the writer has known it continue upwards of a week. Quinine has been prescribed by the writer to patients of both sexes and all ages, and where ascertainable, almost invariably to cinchonism, during thirteen years, and probably to the extent of several thousand ounces of the sulphate; and during that time he has seen no case of danger from its effects, with the exception of three or four cases of imputed abortion. To many the muffled ears of cinchonism are not even disagreeable. Cinchonism is capable of superseding and suppressing that excited condition of the circulation and animal heat known as fever, except when depending on anæmia, as symptomatic of inflammation, or its effects.

Quinine is purely a febrifuge: instead of being a tonic or stomachic, it generally induces anorexia, and a relaxed and macerated state of the skin, some tremulousness, and in many cases slight aphonia. As a febrifuge the full efficacy of quinine is seldom obtained, unless pushed to cinchonism. Cinchonism is therefore the test and criterion, in practice, of the full and sufficient use of quinine. It is probable that the protective influence of quinine against fever seldom lasts longer than the manifestation of cinchonism. The ordinary head-ache of fever does not contra-indicate the use of quinine. The power of quinine seems to be to cut off the connexion between the local irritation and constitutional excitement, to disturb and break the series of morbid elaborations set up in some specific fevers, which terminate, for the most part, in contamination of the blood and loss of vital cohesion of the capillaries. In inter-

mittent fever it is antidotal. Quinine is of little efficacy in intermittent fever, when exhibited during the paroxysm. Quinine is of no efficacy in the last stage of continued or remittent fever, where the vascular and thermal excitement have been succeeded by organic lesion or contamination of the blood. It should be given, as is well known, in the intermission of intermittent fever, and in the formation or the first stage of continued remittent or yellow fever. The use of quinine against relapses of intermittent fever, whether the disease has been primary or secondary, is one of the most valuable applications. In using quinine against the paroxysms of intermittent fever, hourly doses of three grains, till twelve doses be given, is the best mode of saturating the system with the remedy. If, however, the disease be a quotidian, with short intermissions, six grain doses hourly, till six doses be given, will be judicious practice.

In the other fevers where quinine is eligible, and the remedy is prescribed during the existence of febrile excitement, the dose, to be efficacious, must be large, and the impression on the disease sudden and overwhelming. An auxiliary, too, is also required in such cases: twenty-four grains of quinine and twenty grains of calomel, in one dose, is the most powerful resolvent of fever. One or two such doses, with an interval of six hours, and followed by a castor oil purgative, are generally sufficient; but I have prescribed six such doses with efficacy, and I recollect no instance of ptyalism occurring when this treatment was required and adopted, and sometimes there is but mild cinchonism. An intolerance of quinine, or early and intense cinchonism, in such cases, is one of the worst prognostics.

In the treatment of simple remittent fever, or its relapses, calomel is rarely, if ever, prescribed by the writer. Sulphate and carbonate of magnesia mixture, or sulphate of magnesia and tartrate of antimony mixture, as a purgative during the hot stage, or fifteen drops of solution of acetate of morphine, with a drachm of sweet spirits of nitre, if there is much suffering from muscular pains, headache, or emesis and retching, will speedily remove the paroxysm; and followed by quinine, in combination with purgative doses of rhubarb, will fulfil all the indications for the intermission.

But when an European or North American, probably not long from a cold climate, and during the prevalence of malignant disease, is attacked by fever, and shows to the quick and practised eye alarming indications, no fear of the injurious after-effects of the mercurial will have weight to withhold the resolvent dose of calomel and quinine. In cases threatening danger to life only need it be used, and I know of no instance wherein the slightest untoward result has been experienced from its use.

The combination of quinine with tartar-emetic, in pneumonic and bronchitic complications of intermittent, is eminently successful. The forces which disturb the remedial power of quinine in fever are chiefly inflammatory and congestive complications, or a loaded condition of the alimentary canal. These must be obviated by appropriate treatment, and the disease rendered as simple or idiopathic as possible, concurrent with the use of quinine. Thus arteriotomy may frequently be required in continued, remittent, or yellow fever; and in intermittent, with tenderness over spleen, a blister may be required, as an auxiliary to cinchonism.

There is a form of continued, or irregular remittent fever, occurring

chiefly in children or adolescents, in which generally no local cause can be discovered, but which is often imputed to worms; but give what anthelmintics you will, no worms may be passed: hence here they are properly called "stubborn worms." This fever may continue for a week or a fortnight without any contamination of the blood or loss of vital cohesion, and probably depends on intestinal irritation. Danger in these cases chiefly arises from the supervention of some lesion, induced by the long-continued and excessive heat and violent action of the heart, or sympathetic irritation of the brain. In these cases I use quinine, with immediate and signal efficacy, in the following manner:—

The patient is put into a bath, and the cold affusion is applied till the pulse becomes small, and nearly extinct, at the wrist, and the skin cold. He then, while in the bath, gets his dose of quinine (two or three grains) and is returned to bed without being dried. The bath and the dose of quinine are continued hourly as long as the skin persists warm, when the hourly dose of quinine is due. After five or six baths the skin generally becomes permanently cool, and then the quinine is pushed on to cinchonism, alone, and without the bath. This mode of making an intermission in a continued fever I have never found attended with unpleasant and dangerous consequences, and it will generally subdue the fever after every other method has been tried in vain.

In fever of doubtful origin, and where latent inflammation is suspected, I have frequently used a small cantharides blister as a test; in fact, I never like to pass the blistered surface of a patient without inspecting it, its revelations are often so interesting and important. If, instead of the usual vesication of thin serum and cuticle, the vesication is a bladder of fibrinous coagulum, or suety in consistence, inflammatory action is going on, probably in the neighborhood of the part, and tartar-emetic or such like combinations are indicated.

Relapses in intermittents have their determinate periods, the day from the last attack being generally some multiple of *seven*. The usual day of relapse among the acclimatised of this colony is the fourteenth or twenty-eighth. After one or two relapses, the law of each individual case can be ascertained by each patient. The prophylactic which I have adopted with great success, and in my own person first, many years ago, is as follows: Two days before the anticipated relapse, three grains of quinine, to be taken thrice daily for four days; and after a similar relapse interval the quinine to be again taken in the same manner; and so on, repeated three or four times successively. The disease is eradicated completely by thus baffling the relapse.—*L. Lancet, Sept.* 23, 1848.

III. Does Calomel really Expel the Biliary Secretion? By Dr. Michea.

Dr. Michea has published, in *L'Union Medicale*, a very interesting paper on the above question. The author's object was to ascertain, by chemical analysis, whether the green color which purgative doses of the chloride of mercury give to the alvine dejections (besides rendering the latter more copious and less dense) is really owing to a superabundant secretion of bile. Opinions, says Dr. Michea, are not agreed on this point, either in France, Germany, or England. Mr. Higgins (who published his paper in *L'Union Medicale*) and M. Mialhe consider that calo-

mel really excites the biliary secretion. MM. Trousseau and Pidoux, authors of an esteemed work on materia medica, express their doubts on the point. Actual experiments have been made by Dr. Franz Simon, Dr. Golding Bird, and M. Siebert. The first of these inquirers found, after large doses of calomel, a great quantity of bile and biliverdine; the second discovered only a few traces with a hydrocephalic child taking mercury, and the third maintains that the alvine dejections following the use of this metal present no trace whatsoever of bile. The green stools resulting from the use of Carlsbad and Marienbad waters are, on the other hand, denied by M. Kerstin, of Freiberg, to contain any trace of bile, and that physician thinks the color to be due to green sulphuret of iron, by the reduction, in the stomach and intestines, of the sulphate of soda contained in mineral waters, into a sulphuret, which subsequently combines with the iron likewise to be found in these waters. This theory is founded upon the fact, that hydrochloric acid removes the green color of the fæces, and evolves a large amount of sulphuretted hydrogen. Dr. Golding Bird and Professor Schönlein are of opinion that the green color given to alvine dejections by calomel is due, not to an excess of bile, but to an alteration of the hæmatosine. Startled by these dissimilar statements, Dr. Michea began a series of chemical analysis upon—1, the spontaneous alvine dejections of healthy men; 2, the same substance, of a more or less green color, from men affected with gastro-intestinal inflammation; 3, the same, resulting from various doses of calomel; and 4, evacuations produced by neutral salts and resinous purgatives. The author prefers for his tests, the strong nitric acid of Dumas to the sulphuric acid and syrup of Pettenkoffer. The spontaneous alvine dejections of six healthy individuals, four adults and three children, were examined; their filtered solution remained unaltered by nitric acid. The evacuations of three patients affected with gastro-intestinal derangement were examined, and much bile was found in one case only. When the vomiting had subsided, the bile disappeared from the dejections. Calomel given to eight persons, five men and three women, in doses varying from twelve to fifteen grains, produced green stools in four patients only. These being analyzed, it was found that they contained a superabundance of bile, and that, with nitric acid, two principles of that secretion might be made manifest—viz., biliverdine and albumen. The evacuations of two of these subjects gave, not a pure green by nitric acid, as this reagent will generally produce on biliverdine, but a dirty olive; (on this Dr. Michea grounds his belief, that he found bile, and not biliverdine alone;) this olive color, however, assumed the same successive shades of purple, red, and yellow, which biliverdine will yield. In the two other instances, the nitric acid gave a drab or yellowish-red color, almost without any subsequent shades. The author puts the question, whether this might not have been the bilifulvine of Mülder. The evacuations of five persons who took neutral salts and resinous purgatives were never green, and exhibited no albumen on the addition of either nitric acid or heat, whereas the albumen, as shown by a plentiful precipitate, was abundant with the four patients using calomel. This albumen was, according to Dr. Michea, furnished by the bile. These experiments would, then, tend to elucidate the practice—first, of English physicians, who regard calomel as a specific in liver affections; secondly, of Dr. Schönlein, in typhus, who looks for green evacuations by fifteen-grain doses of

the chloride of mercury; and thirdly, of Russian practitioners, who consider calomel the most efficient agent against cholera. Modern organic chemists look upon bile as partly of an excrementitial nature, and that the liver as well as the lungs removes from venous blood substances which have become unfit for assimilation, (the resin and fat to be found in the bile containing much carbon and hydrogen.) The more plentiful, therefore, the secretion of bile, the purer the blood. Thus it becomes clear how calomel may act beneficially in miasmatic contaminations, in typhus, and cholera. We subjoin Dr. Michea's conclusions:

1. Calomel acts in a special and direct manner on the liver: this salt occasions alvine evacuations of a peculiar color, due to an excess of actual bile, as shown by the action of nitric acid, which points to the presence of its coloring matter (biliverdine) by change of coloration, and of its albumen by precipitating the latter.

2. This influence of calomel upon the biliary secretion is not constant. It varies according to certain conditions and circumstances.

3. The green evacuations produced by calomel are more frequent with men than women. (This the author supposes to be owing to the greater quantity of alkaline chlorides generated in the stomachs of men, which chlorides, according to Mialhe, would contribute to transform the chloride of mercury into a bichloride.)

4. These evacuations have a peculiar consistence—viz., a viscous liquidity, somewhat like oil, or white of eggs beaten up together.

5. In some affections of the intestinal canal, an excess of bile, to be detected by reagents, may be found in the evacuations.

6. Spontaneous alvine evacuations in healthy people are quite free from an excess of bile.

7. Neutral salts and resinous purgatives exercise no direct or special influence on the liver. The alvine dejections which they produce, contain no excess of bile, remaining unaltered by nitric acid or heat.—*London Lancet.*

IV.—The law relating to the importation of Adulterated Drugs, Medicines, and Chemical Preparations into the United States.

The medical profession, as well as the entire community throughout the Union, are greatly indebted to Dr. T. O. Edwards, late member of Congress from Ohio, for his indefatigable and finally successful efforts to procure the passage of this most salutary and important law. The developments already published by the examiners appointed in New York and Boston, are of the most startling character, and certainly cannot fail to effect a reformation of some of the *vilest abuses* ever practised upon a generous and confiding people. We hope every physician in the country will obtain access to these reports, and endeavor to open the eyes of the people to the enormous frauds they expose. We had intended to give the able report of Dr. M. J. Bailey to the New York Academy of Medicine, but find it out of our power to do so. It is now very evident that this odious business of adulterating medicines, formerly carried on to such an enormous extent in Europe, is to be transferred to this country, and will here produce all its baneful effects, if not arrested by the action of our State legislation. The *safety* of the people demands that

every State should pass laws for their protection against the introduction of spurious, poisonous and worthless medicines. This important duty of examination should be in every instance confided to educated and competent physicians, and never to apothecaries alone. The South and West afford the principle fields for the consumption of adulterated medicines, and we therefore invite special attention to the subject, in these regions.

We called on Mr. P. A. Bertrand, the examiner appointed for New Orleans, for information on the subject, but found that he had never made a report. Our friend, Dr. Simonds, had the kindness to obtain the following statement from the Collector of this port. We have no reason to doubt that the leading apothecaries of New Orleans have generally kept supplies of as good medicines as are to be had in the markets, but we are pleased to see one or two new establishments opened since the passage of the "*Drug Law*," which promise to keep nothing on hand except the *most approved articles*, and moreover, to confine themselves strictly to their *legitimate business*. This course should meet the approbation and encouragement of every practising physician.

STATEMENT *showing the value in Dollars of the Medicines and Medicinal Drugs and Preparations imported from foreign ports, into the District and port of New Orleans, during the year* 1849.

Quarters.	Species of Merchandise.	Amount for each quarter.		Total amount for the year 1849.
1st Quarter.	Medicines and Medicinal Drugs.....	21,717		
	Medicinal Preparations.....	1,462		
			23,179	
2d Quarter.	Medicines and Medicinal Drugs.....	15,165		
	Medicinal Preparations.....	2,777		
			17,942	
3d Quarter.	Medicines and Medicinal Drugs.....	7,200		
	Medicinal Preparations.....	2,263		
			9,463	
4th Quarter.	Medicines and Medicinal Drugs.....	15,606		
	Medicinal Preparations.....	5,868		
			21,474	
				$72,058
	None condemned.			

COLLECTOR'S OFFICE, New Orleans, 22d March, 1850.

Signed, SAM. J. PETERS, Collector.

MEDICAL COLLEGES OF THE SOUTH AND SOUTH-WEST.

As an important part of the Medical History of the South, we have thought it advisable to obtain brief sketches of the rise and progress of the Medical Schools, now in operation in this region. We therefore addressed a respectful request for the desired information to the Deans of the Faculties at Lexington and Louisville, Ky.; New Orleans, La.; Augusta, Ga.; and Charleston, S. C. The reports that follow are all we have received. The schools in Kentucky are a little beyond the scope allotted to this work; but we have deemed it proper to insert notices of them, on account of the large number of Southern students who annually attend them. We have no connection whatever with any Medical Schools, and shall studiously endeavor to maintain an impartial relation to them all. Whilst we feel a deep interest in the subject of Medical Education throughout our widely extended country, we shall do all in our power to encourage and promote our Southern Schools. The Professors in Medical Colleges should set examples of industry and devotion to the science, and should show, by their annual contributions, the claims they have to the high and responsible positions they occupy. They should be *leaders*, and not *followers*, in the march of improvement.

The authors of the following notices will please accept our thanks:

I.—University of Louisville.—Medical Department.

The attempt to remove the medical department of Transylvania University to Louisville, in 1837, having proved unsuccessful, and the contentions among the Professors, growing out of that measure, having induced the Board of Trustees to dissolve the Faculty, Drs. Caldwell, Cooke, and Yandell accepted chairs in the MEDICAL INSTITUTE OF LOUISVILLE, which was organized in the spring of that year. The following gentlemen constituted its Faculty, to wit:—Charles Caldwell, Professor of the Institutes of Medicine and Medical Jurisprudence; John E. Cooke, Professor of Theory and Practice; Jedediah Cobb, Professor of Anatomy; Joshua B. Flint, Professor of Surgery; Henry Miller, Professor of Obstetics and the Diseases of Women and Children; and Lunsford P. Yandell, Professor of Materia Medica. During the first session, Dr. Yandell also lectured on Chemistry. The first class of students numbered eighty; and at the commencement in March, 1838, twenty-four of that number received the degree of M. D.

In the spring of 1838, Charles W. Short was elected Professor of Materia Medica and Medical Botany, Dr. Yandell having been transferred to the chair of chemistry. The Faculty as now organized, embraced four members of the late Faculty of Transylvania. The number of the second class was one hundred and twenty, of whom twenty-seven received the medical degree.

The year following, the experiment was made of creating an eighth chair in the institution, to which Daniel Drake, M. D., late of the Cincinnati Medical College, was elected. The new chair was styled Clinical Medicine and Pathological Anatomy. Encouraging as had been the growth of the school during the first two years of its existence, the third class shewed a still more rapid rate of increase, the numbers having risen from one hundred and twenty to two hundred and four. The number of graduates at the third commencement was thirty-eight.

Before the beginning of the fourth session, in 1840, Dr. Flint was succeeded in the chair of surgery by Samuel D. Gross, formerly Professor of General and Pathological Anatomy in the Cincinnati Medical College. The number of students during this session was two hundred and eight. The year following, the class increased to two hundred and sixty-two, upon fifty-three of whom the degree of Doctor of Medicine was conferred. The session ensuing was less prosperous; there was a great abatement in the size of the class. The catalogue of that year, 1842-43, shows but a hundred and eighty-nine students, of whom thirty-seven were admitted to the degree of M. D. But the depression was temporary, and two hundred and forty-two students were in attendance the session succeeding. The number of graduates at the end of this session was forty-seven.

In the spring of 1844, Dr. Cooke tendered his resignation to the Board of Trustees, and the chair of Theory and Practice which he held, was united to that of Clinical Medicine and Pathological Anatomy, held by Dr. Drake, under the style of Pathology and Practice. The class of the ensuing winter numbered two hundred and eighty-six; the number of graduates was seventy-one. In 1845-6, the ninth session of the school, the class had swelled to three hundred and forty-five, and the number of graduates was seventy-three.

The UNIVERSITY OF LOUISVILLE was chartered in February, 1846, and

the Medical Institute of Louisville was made its medical department. Hitherto, the institution had been under the direction of a close corporation—of a board of managers who held perpetual office and filled their own vacancies. By the present charter, the Trustees of the University, eleven in number, are elected by the city council; they elect from their body a president, who is perpetual. Two members of the board go out every two years, but are re-eligible. Under such a provision changes in the board can hardly occur.

The first session of the University opened under auspicious circumstances, and the number of its students was greater than had ever before been attracted to the city. The class, that season, numbered three hundred and forty-nine, seventy-five of whom were admitted to the doctorate in the spring. In the year following the class grew to four hundred and six, and the degree of M. D. was confirmed on ninety-four. The number of students in 1848-9 was three hundred and thirty-one: the number of graduates eight-one.

Towards the close of the winter, Dr. Drake signified to the Board of Trustees his determination to retire from the school at the end of the session. The chair of Dr. Caldwell was also vacated in April, and in June, Dr. Short tendered to the Board his letter of resignation. The vacancies thus created were filled as follows:—Dr. Elisha Bartlett was elected Professor of Theory and Practice; Dr. Yandell was transferred from the chair of Chemistry to that of Physiology and Pathological Anatomy, and was succeeded by Dr. Benjamin Silliman, jun., in the chair of Chemistry; and Dr. Lewis Ropes was appointed to the chair of Materia Medica and Therapeutics.

The number of Students in attendance during the Session just closed was three hundred and seventy-six; the number of graduates in March was—

The following table will show at one view the number of Students and graduates for each year:

		Students.	Graduates.
First Session,	1837—8	80	24
Second "	1838—9	120	27
Third "	1838–40	204	38
Fourth "	1840—1	208	48
Fifth "	1841—2	262	53
Sixth "	1842—3	189	37
Seventh "	1843—4	242	47
Eighth "	1844—5	286	71
Ninth "	1845—6	345	73
Tenth "	1346—7	349	75
Eleventh"	1847—8	406	94
Twelfth "	1848—9	331	81
Thirt'nth"	1849–50	376	—
Total		3398	

The Lectures in this Institution commence on the first of November, and close the last of February. Six Lectures are delivered daily, two of which are delivered in the amphitheatre of the Marine Hospital in the afternoons of Tuesday and Friday. The original appropriation of the city for the Institution was a lot of ground valued at $40,000; a Col-

lege edifice which cost $53,000; and books, chemical apparatus, anatomical preparations, surgical and obstetrical instruments and apparatus, to the amount of $20,000—in all $113,000. The matriculation fees belong to the Institution, and are applied to the increase of the library, apparatus, and other means of instruction. The Marine Hospital affords a sufficient number and variety of cases for the illustration of Clinical medicine and surgery. Attendance upon the Clinical courses, in this or some other Hospital, is made a prerequisite to graduation in the University of Louisville. Of the late class of students, three hundred and twelve took the Hospital ticket. The fees in the Institution, including the matriculation and Hospital tickets, and the ticket of the Demonstrator of Anatomy, the two latter of which are required to be taken but once, are $125, and all payable in advance.

II.—Medical Department of the University of Louisiana, at New Orleans.

This Institution, under the name of the Medical College of Louisiana, was chartered by the Legislature on the 2nd of April, 1835; without any endowment. In the winter of 1834–5; a course of Medical Lectures was delivered to a very small class. The first course of lectures under the charter was delivered in part at the Charity Hospital, (Anatomy, Physiology, Pathology, and Surgery), and in part at No. 41 Royal street, (Chemistry, Practice, Matimedica, and Midwifery), by the following faculty:

Dr. Chas. A. Luzenberg, Principles and Practice of Surgery.
" Ed. H. Barton, Mat. Med. Therap. and Hygiene.
" John Harrison, assisted by Dr. Stone, Anatomy, Physiology, and Path. Anatomy.
Dr. Thos. R. Ingalls, Midwifery, and diseases of women and children.
" M. Mackie, Theory and Practice, Med. and Clin. practice.
" W. B. Powell, Chemistry and Pharmacy.

The sum of $950 was contributed by the Professors for a chemical apparatus. On the 12th of Feb. 1836, Dr. Ingalls resigned, and his chair was filled on the 25th of Feb. 1836, by the election of Dr. James Jones. On the 12th of October, 1836, Dr. Powell resigned, and was succeeded on the 15th of the same month, by the election of Dr. J. L. Riddell to the chair of Chemistry. At the same time Dr. Thomas Hunt was chosen Professor of special Pathological Anatomy and Clinical practice.

The course of Lectures for 1836–7, was delivered in the Charity Hospital. January 28, 1837, Dr. Luzenberg resigned, and Dr. Warren Stone was elected Professor of Anatomy, and *pro tempore* Professor of Surgery. May 31st, 1837, Dr. Hunt resigned. The Chemical Lectures of 1837–8 were delivered at No. 14 St. Charles street; the other Lectures in the Charity Hospital. Dr. Mackie resigned August 29, 1838. The duties of his chair were divided between Drs. Harrison and Riddell. The Chemical Lectures of 1838–9 were given in the basement of the Poydras street church; the other Lectures in the Charity Hospital.

April 3d, 1839, Dr. G. A. Nott was appointed Professor of Anatomy. April 10, 1839. Dr. A. H. Cenas was appointed Professor of Midwifery,

&c.; Dr. Barton was transferred to the chair of Materia Medica, and Dr. Jones to that of Practice. The Chemical Lectures of 1839–40 were given at the corner of Gravier and Carondelet streets; the other Lectures in the Charity Hospital. Dr. Barton resigned June 26th, 1840, and a few months thereafter Dr. S. W. Ruff was appointed his successor to the chair of Materia Medica. The course of 1840–1 was delivered at 239 Canal street. Dr. Nott resigned March 16, 1841, and on the 6th July, 1841, Dr. Harrison was selected to teach Anatomy, in addition to Physiology. The Lectures of 1841–2 were delivered at 239 Canal street. On the 7th of June 1842, Dr. W. M. Carpenter was appointed to the chair of Materia Medica, vacant by the death of Dr. Ruff; and at the same time Dr. A. J. Wedderburn was chosen Professor of Anatomy. For the course of 1842–3, the Lectures were delivered at 239 Canal street.

In 1843, the legislature granted a ten years lease of a lot of ground at the corner of Common and Phillippa streets, to the Medical College; conditioned that the professors of the college should, during each winter, furnish gratuitous medical and surgical services to the Charity hospital; and that the edifice to be erected by the professors on said lot, should, at the end of the lease, become the property of the State. The contemplated edifice costing about $12,000, was erected at the private expense of the members of the faculty of the medical college in 1843. In this edifice the lectures of 1843–4, 1844–5, 1845–6, 1846–7, were delivered; also the chemical lectures of 1847–8.

In the State Constitution of 1845, the medical college of Louisiana is incorporated as the medical department of the University of Louisiana. An act of the legislature approved 16th February 1847, carries this provision of the constitution into effect; and another act approved 22d April 1847, provided for the erection of a more commodious edifice on Common street, (adjoining the building alluded to,) near 100 feet square, from the funds of the State, for the accommodation of the medical department. This building cost the State $40,000.

In the year 1844 and subsequently, the individual members of the faculty expended liberal sums from their private resources to procure the means of teaching with advantage; the professor of chemistry alone, for instance, contributed $5,000 for the purchase of chemical and philosophical apparatus, mineral specimens, &c. The faculty also contributed $2,500 towards the erection of an amphitheatre at the Charity hospital.

On the 27th of October 1848, Dr. G. A. Nott was elected to fill the chair of materia medica, made vacant by the death of Dr. Carpenter, a few days previously. On the 28th of March, 1849, Dr. Thomas Hunt was elected to succeed Dr. Harrison, who died in March, 1849.

In March, 1850, the legislature granted the sum of $25,000 to the medical department of the university of Louisiana, to be expended in the purchase of anatomical and pathological specimens, models, instruments, specimens of materia medica, pharmaceutical apparatus, chemicals, chemical and philosophical apparatus, &c., for the use of said department.

The State endowments granted to this institution may be thus summed up:

Lot of ground on Common street, in the centre of the city, 150 feet front, by 200 feet deep,.....	$50,000
Medical College edifice,.....	40,000
Appropriated for museum and apparatus,.....	25,000
Total,.....	$115.000

Tabular statement of the number of matriculants, and of the number of graduates each session

Session of	Number of matriculants	Number of graduates.
1835—6	15	6
1836—7	23	8
1837—8	26	9
1838—9	26	7
1839—40	22	2
1840—1	26	8
1841—2	34	11
1842—3	62	12
1843—4	65	13
1844—5	93	15
1845—6	100	19
1846—7	166	27
1847—8	163	31
1848—9	140	28
1849—50	175	31

The medical faculty of the University of Louisiana is at present, constituted as follows; the names being in the order of the date of appointment.

James Jones, M. D., *Prof. Theory and Practice of Medicine.*
J. L. Riddell, M. D., " *Chemistry.*
Warren Stone, M. D., " *Surgery.*
A. H. Cenas, M. D., " *Obstetrics, &c.*
A. J. Wedderburn, M. D., *Prof. Anatomy.*
G. A. Nott, M. D., " *Materia Medica and Therapeutics.*
Thomas Hunt, M. D., " *Phys. and Pathol.*
Y. R. Lomonier, M. D., *Demonstrator.*

March, 1850.

III.—Medical College of Georgia.

The Medical College of Georgia was organized in 1832, with the faculty as follows:

L. A. Dugas, M. D., *Professor of Anatomy.*
P. F. Eve, M. D., " *Surgery.*
John Dent, M. D., " *Institutes and Practice of Medicine.*
Milton Antony, M. D., " *Midwf. and the Diseases of Infants.*
Joseph A. Eve, M. D., " *Materia Medica and Therapeutics.*
L. D. Ford, M. D., " *Chemistry and Pharmacy.*

In 1833 Alex. Cunningham, M. D., was elected to fill the vacancy occasioned by the resignation of Dr. John Dent. In 1837 George M. Newton, M. D., was elected Professor of Physiology and Pathological

Anatomy; L. D. Ford, M. D., Professor of Institutes of Medicine and Medical Jurisprudence, and Charles Davis, M. D., Professor of Chemistry and Pharmacy.

In 1838, Professor Cunningham having resigned, the faculty was thus re-organized:

L. E. Dugas, M. D., *Professor of Physiology and Pathological Anatomy.*

P. F. Eve, M. D., " *Surgery.*
L. D. Ford, M. D., " *Institutes and Practice of Medicine.*
Milton Antony, M. D., " *Midwf. and diseases of women & infants.*
Joseph A. Eve, M. D., " *Materia Medica and Therapeutics.*
Charles Davis, M. D., " *Chemistry and Pharmacy.*
G. M. Newton, M. D., " *Anatomy.*

In 1839, Professor A. Eve was transferred to the Chair of Obstetrics and of the Diseases of Women and Infants to fill the vacancy occasioned by the death of Professor M. Anthony, and in 1849, Ignatius P. Garvin, M. D., was elected Professor of Materia Medica and Therapeutics.

In 1840 Charles W. West, M. D., was elected Professor of Chemistry and Pharmacy in place of Professor Davis, resigned.

In 1841, Alexander Means, M. D., was elected Professor of Chemistry and Pharmacy in place of Professor West, resigned.

The faculty is now composed of—

L. A. Dugas, M. D., *Professor of Physiology and Path. Anatomy.*
P. F. Eve, M. D., " *Principles and Practice of Surgery.*
L. D. Ford, M. D., " *Institutes and Practice of Med.*
Joseph A. Eve, M. D., " *Obstetrics and Diseases of Women and Infants.*
Alex. Means, M. D., " *Chemistry and Pharmacy.*
I. P. Garvin, M. D., " *Mat. Med. and Therapeutics and Med. Jurisprudence.*
G. N. Newton, M. D., " *Anatomy descriptive and General.*

	No. of Students.	*No. of Graduates.*
In 1832–33	28	4
'33–34	30	15
'34–35	37	15
'35–36	31	8
'36–37	44	15
'37–38	39	14
'38–39	60	12
'39–40	54	18
'40–41	73	19
'41–42	115	24
'42–43	128	38
'43–44	140	39
'44–45	118	33
'45–46	112	31
'46–47	106	33
'47–48	151	52
'48–49	133	36
'49–50	176	

AMERICAN MEDICAL JOURNALS.

If the multiplication of Medical Periodicals be any evidence of the progress and improvement of our Profession, (and to our mind it certainly affords the very best,) we have reason to congratulate ourselves on the advancement made within the last quarter of a century. The subject is suggestive of many reflections; but our nearly exhausted limits and energies too, compel us to forego the pleasure of indulging them. From experience, we know something of the labor of conducting a Medical Journal, and can therefore appreciate the important services annually rendered by the editors of those periodicals. We cannot express the deep gratitude we feel for the flattering notices which have been bestowed upon our humble merits and the work we have undertaken. We have done all we could do, in so short a time, to get up the work in a creditable style; but, as this is only *the beginning*, we trust that due allowance will be made for its numerous imperfections. We had expected to draw largely on the Medical Journals of the year, especially those in the South, but we find that our original communications have taken up all our space, and we are therefore only allowed the pleasure of enumerating those which have been kindly sent to us or loaned by our friends.

The following is a list of the principal Medical Journals published in the United States, with the number of original communications they contained, during the year 1849 :

1. *The American Journal of the Medical Sciences. Edited by* Isaac Hays, M. D. *Philadelphia. Published Quarterly. Each number contains* 280 *pages.* $5 *per annum.*

Fifty-nine original communications in the 1st part, besides a number of less importance in the latter part.

2. *The New York Journal of Medicine, and the Collateral Sciences. Edited by* S. S. Purple, M. D. *New York. Published Bimonthly. pp.* 144. $3 *per annum. (In Exchange.)*

Thirty-nine original communications in the 1st part, besides others in the latter.

3. *The Medical Examiner and Record of Medical Science. Edited by* F. Gurney Smith, M. D., *and* D. H. Tucker, M. D., *till the end of the year; now by* Dr. Smith *alone. Philadelphia. Published monthly. pp.* 72. $3 *per annum.*

Sixty original communications.

4. *The Ohio Medical and Surgical Journal. Edited by the late* John Butterfield, M. D., *until his death in September. Now edited by* S. Hanbury Smith, M. D. *Columbus. Published every other month. pp.* 96. $3 *per annum. (In Exchange.)*

Thirty-three original communications.

5. *The Western Lancet and Hospital Reporter. Edited by* L. M. Lawson, M. D. *(The late* Professor J. P. Harrison *was an associate editor of this Journal.) Cincinnati, O. Published monthly. pp.* 72. $3 *per annum. (In Exchange.)*

Thirty original communiuations. One number missing.

6. *The Western Journal of Medicine and Surgery. Edited by* L. P. Yandell, M. D., *and* Theodore S. Bell, M. D. *Louisville, Ky. Published monthly. pp.* 96. $5 *per annum. (In Exchange.)*

Eleven numbers. Forty-eight original articles.

7. *The Buffalo Medical Journal and Monthly Review of Medical and Surgical Science. Edited by* Austin Flint, M. D., *Buffalo, N. Y. Published Monthly. pp.* 64. $2,50 *per annum. (In Exchange.)*

Fifty-five original articles.

8. *The North-Western Medical and Surgical Journal. Edited by* W. B. Herrick, M. D., *and* John Evans, M. D., *Chicago and Indianopolis. Published every other month. pp.* 88 *to* 96. $2,50 *per annum. (In Exchange.)*

Thirty-six original articles.

9. *The Boston Medical and Surgical Journal. Edited by* J. V. C.

SMITH, M. D. *Boston. Published weekly and Monthly.* $3 *per annum. (In Exchange.)*

Eleven numbers before us. One hundred and eighty-nine original articles, generally short and practical.

10. *The St. Louis Medical and Surgical Journal. Edited by* M. L. LINTON, M. D., J. S. MOORE, M. D., W. M. M'PHEETERS, M. D., *and* J. N. M'DOWEL, M. D. *St. Louis. Published Bi-monthly.* $3 *per annum.*

On account of a serious calamity by fire, this work was suspended for several months, but is resumed.

11. *The Transylvania Medical Journal. Edited by Ethelbert L. Dudley, M. D. Lexington, Ky. Published bi-monthly. pp.* 96. ($3 *per annum. In Exchange.*)

This work is just commenced and is to contain a series of Surgical Essays from the distinguished Professor B. W. Dudley, which, when completed, will present a full record of his extensive experience.

12. *The Charleston Medical Journal and Review. Edited till the end of* 1849, *by* P. C. GAILLARD, M. D. AND H. W. DE SAUSSURE, M. D., *but now edited by* D. J. CAIN, M. D. AND F. P. PORCHER, M. D. *Charleston. Bi-monthly. pp.* 132. $4. *(In Exchange.)*

This journal has just completed its fourth volume, and has displayed from its commencement a high degree of editorial ability. It has already undergone three changes of editors, yet its high character seems to be fully sustained. It presented 40 original communications during the year, all of which are valuable and highly creditable to their Southern authors. The Reviews and Bibliographical notices which appear in this journal will compare favorably with any in the country. If the patronage of the work should be at all commensurate with its merits, it will not be suffered to languish, but be sustained by the profession in a manner that will compensate liberally the high talent and arduous labor annually bestowed upon it. It has our best wishes for its success.

13. *The Southern Medical and Surgical Journal. Edited to the end of* 1849 *by its original founder,* PAUL F. EVE, M. D.; *now by* I. P. GARVIN, M. D., *Augusta, Georgia. Published monthly. pp.* 64. $3 *per annum.*

This Journal has completed its 5th volume, and we trust will prove a lasting monument to the high talent and indefatigable energy of its worthy founder. Under an extraordinary weight of private practice, professorial duties and domestic affliction, he has maintained this Journal, solitary and alone, thus displaying a devotion to medical science which should endear him to every physician in the South. Long may he live to honor his profession and his State! May fortune smile upon the evening of his life and reward him richly for the toils and sufferings of his earlier years.

The volume of the year contains 42 original communications; generally short, but practical and useful. The number for December contains an interesting communication from Dr. C. W. Long, of Jefferson, showing conclusively that he had used Sulphuric ether by inhalation as an anæsthetic agent in surgical operations, for four years

previous to the announcement of the great discovery of Drs. Jackson and Morton, of Boston. Unfortunately, however, he kept it to himself, and thus lost the opportunity to immortalize himself and shed a lustre upon his profession in the South.

In this Journal Prof. Eve has published a number of surgical operations which are very creditable to him. We sincerely hope the journal may prosper.

14. *The New Orleans Medical and Surgical Journal. Edited by A. Hester, M. D. New Orleans. Published bi-monthly. pp.* **144.** *($5 per annum.)* **42** *original articles in the first part; some others in the latter part. (In Exchange.)*

This work was commenced by its present editor, and the editor of these reports in 1844, and is the oldest of the Southern journals now in operation. Happening to be thrown together in the city of New Orleans and finding our fortunes alike desperate, "a fellow-feeling" gave rise to an intimacy between us which it is hoped will endure through life. Without money, with but few acquaintances, and dependent on a precarious practice which barely afforded the most economical support, we determined to project the hazardous adventure of a Southern medical journal and trust to the liberality of the medical profession for its support. The field was ample, rich, and entirely unoccupied, but it was difficult to see how the experiment could succeed without having *one cent of capital* to start on. We actually had the Prospectus printed *on a credit*, one of our booksellers being willing to go that far at all hazards, and we paid the bill, *eleven dollars*, out of the first spare money we had. The Prospectus being out and distributed throughout the country, we were fairly committed to bring out the work, but as yet, could find no person willing to undertake the publication. All we had to give was our own labor, which was cheerfully offered, but something more substantial was required. We appealed to the booksellers, to the proprietors of the city newspapers, and finally, to the Medical College and leading physicians of the city, for a guaranty of five hundred dollars, but all to no purpose. The enterprize was *conceived in poverty*, and *poverty finally brought it forth!* At this stage of our gestation, we had the good luck to come across a poor *French printer*, who had *a handful of type and nothing to do.* Him we persuaded, by means of *flattering promises*, to bring out the first number; and thus the New Orleans Medical Journal saw the light! Each number made out to pay its own way, but left no surplus on hand. In this manner we struggled through the first volume and were entering upon the second with prospects somewhat improved, when an unexpected rival appeared in the field. The Professors of the Louisiana Medical College issued a prospectus announcing the early appearance of a new Medical Journal from their school. An union was effected between the two, and the late Professors Harrison and Carpenter joined us in the publication of the New Orleans Medical and Surgical Journal. In 1848 we voluntarily withdrew from the Journal, and in less than two years, Drs. Carpenter and Harrison were removed by the hand of death, leaving the present worthy editor "alone in his glory." And nobly has he devoted himself to the discharge of the heavy duties devolving upon him. It affords us much pleasure to say, that this Journal is now in a very prosperous condition, having a list of subscribers numbering about *one thousand*, and constantly increasing. It has given a decided impetus to the cultivation of medical science in the South, thus fulfilling the highest object of its original founders. Its circulation is confined chiefly to the Southern States, though some of its contributions, particularly those of Dr. Bennet Dowler, have attracted much attention both at the North and in Europe. We trust this historical notice will not be unacceptable to the reader, as it adds another to the numerous instances on record, of the triumph of energy and perseverance over obstacles apparently insurmountable. We heartily wish the editor and his work all manner of success.

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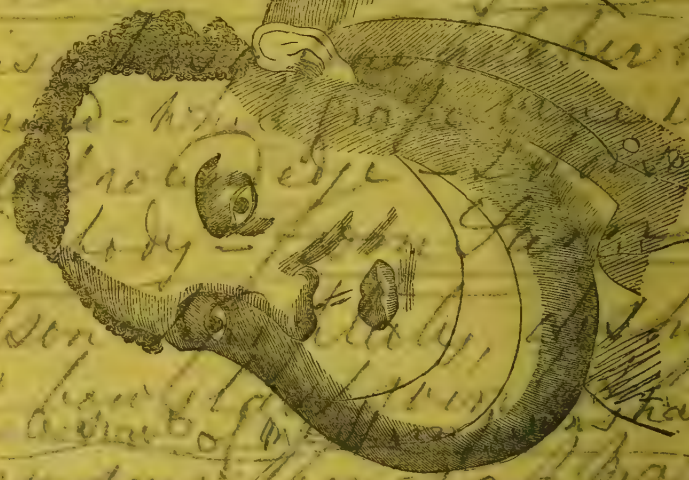

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